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Nuwejaarsgroete van die President

New Year Greetings from the President

Dr. H. Grant-Whyte, President van die Mediese Vereniging van Suid-Afrika, stuur die volgende boodskap van Nuwejaarsgroete aan lede van die Vereniging:

Dr. H. Grant-Whyte, President of the Medical Association of South Africa, sends the following message of greeting for the New Year to members of the Association:

Dit is die gebruik dat die President 'n Nuwejaarsboodskap aan die Redakteur en personeel van die *Tydskrif* stuur, en deur die Redakteur aan alle lede van die Vereniging. Die boodskap—en wat 'n mooi gewoonte is dit nie—is altyd dieselfde: die ou boodskap en die ou en opregte wens. Gelukkige Nuwejaar.

Dit is ook die jaarlikse gewoonte dat die President tesame met hierdie goeie wense ook 'n oorsig van die jaar wat verby is en die jaar wat voorlê lewer.

Daar is 'n paar dinge wat melding verdien en waarmee u reeds bekend is, en waarop die Vereniging as 'n organisasie baie trots kan wees. Ons onlangse Kongres sal lank onthou word as 'n waardevolle belewing, en ek dink ons kan almal, elk op sy afsonderlike gebied, dankbaar wees vir die teenwoordigheid en inspirasie van so baie belangrike besoekers. Vir alle kante is gelukwense en waardering uitgespreek in verband met hierdie gebeurtenis, en ek hoop en vertrou dat die Kongres veel daartoe bygedra het om die eendrag, wat ons internasionaal in ons beroep saamsnoer, te versterk.

In Oktober van die afgelope jaar het ons nog 'n mylpaal bereik—die eerste Eksamens vir fellow-skappe van die Kollege van Interniste, Chirurge en Verloskundiges van Suid-Afrika, en die erkenning

It is the custom for the President to send a New Year message to the Editor and staff of the *Journal* and through the Editor to all members of the Association. The message—and what a good thing it is—is always the same: the old message and the old and true wish. A Happy New Year.

Accompanying this good wish is the annual practice of adding some Presidential assessment of the year that has gone and of the year that is to come.

There are one or two things to record, already known to you, of which the Association as a body can be very proud. Our recent Congress will long be remembered as a most rewarding experience, and in our several ways I think we can all be grateful for the presence and inspiration at the Congress of so many visiting personalities. From all sides I have received the most congratulatory appreciations of the occasion, and my hope and belief is that our Congress has done much to strengthen the unity that binds us internationally in our profession.

The past year was also marked, in October, by the holding of the first Examinations for the fellowships of the College of Physicians, Surgeons and

op die Register van Spesialiteite van hierdie lidmaatskappe. Ek verneem dat die eksterne eksaminatore, sir Russell Brain, sir Harry Platt en dr. Joseph Wrigley, uiters tevrede is met die standaard wat ons kandidate bereik het, en ek weet dat baie van die kandidate ook in hul skik sal wees met die uitslae. Op ander gebiede word ons al meer bewus van die verhoudings tussen ons as 'n professionele vereniging en die Regering en ander beroepsverenigings wat aan ons verwant is. Die nuwe voorgestelde wetgewing wat ons affekteer en ons eeue-oue regte en voorregte raak, het ons waaksaamheid gevestig.

Die lede wat ons verteenwoordig het, het 'n houding ingeneem teenoor hierdie wetgewing wat bepaal was deur erkenning van ons plig teenoor die publiek, en ons is hulle dankbaar vir die wyse waarop hulle ons belange beskerm. Dit is reg, inderdaad in die belang van die volk, dat ons in die toekoms ook die voorregte wat deur die eeue eie aan ons beroep was sal behou, maar dit is ewe belangrik dat ons die nuwe omstandighede wat ontwikkel, verstaan. Ek is bly dat ons verhouding met die Regering en die ander beroepsverenigings waaraan ons verwant is so harmonieus is.

Die ingewikkeldheid van die moderne lewe noodsaak groeiende beheer van regeringskant oor alle afdelings van menslike aktiwiteite. Grootse eksperimente in baie lande in die vele vorms van volksgesondheid getuig van die ineenstrengeling van regerings in ons professionele aangeleenthede, en ons kan redelik aanneem dat hierdie eksperimente, in gesamentlike ondervinding, sal voortgaan om die toekoms te beïnvloed.

Ons het in die afgelope jare, in hierdie land, die ontwikkeling van mediese hulpverenigings en organisasies belewe; sommige van hulle is institusionele genootskappe wat onder regeringsbeskerming staan, en ander spruit uit die uitgebreide vertakkings van versekeringsmaatskappye.

Die Vereniging het baie aandag gewy aan hierdie aspekte van die geneeskunde, en dit is heel moontlik dat ons 'n bydrae het om te lewer aan hierdie probleem en soortgelyke vraagstukke.

Ons inwendige sake is nog steeds gelukkig en simpatek, en word progressief goed beheer. Die Vereniging is gelukkig in die redaksie en bestuur van die *Tydskrif*, in die diens van sy personeel, en in die toewyding van so baie lede wat hul tyd en vaardigheid aan sy aangeleenthede skenk. Spesiale dank word aan hulle betuig.

En so kan ons die Nuwe Jaar tegemoet gaan, soos dit altyd behoort te wees, met vaste hoop en doelgerigtheid vir die toekoms van 'n Vereniging wat so baie vir ons almal beteken.

BOODSKAP VAN DR. J. H. STRUTHERS

Voorsitter van die Federale Raad van die Mediese Vereniging van Suid-Afrika

Terwyl ons nou op die drumpel van die Nuwe Jaar staan, wil ek u graag nooi om vir 'n oomblik saam met my terug te kyk op die gebeure in ons Mediese Vereniging.

Ek glo dat die meeste van ons as gevolg van ons roeping as geneeshere jaloerse individuë is. Ons meen, en heeltemal tereg ook, dat ons ons mediese kuns wil toepas op die wyse wat ons gewete en beginsels voorskryf. Maar dan, meen ek, voel baie van ons dat 'n mens nie in vandag se wêreld alleen

Obstetricians of South Africa, and by the recognition of these fellowships on the Register of Specialists. I hear that the external examiners—Sir Russell Brain, Sir Harry Platt, and Mr. Joseph Wrigley—are more than pleased with the standards attained by our candidates, and I have reason to believe many of the candidates are going to be pleased with the results.

In other fields, we have been made increasingly aware of our relations as a professional body with both the Government and other professional bodies allied to us. New proposed legislation affecting us and touching our ancient rights and privileges has required our vigilance.

To such legislation those of our members who have represented us have brought attitudes dictated by a recognition of our public duty, and we are grateful to them for the manner in which our interests have been and are being safeguarded. Whereas it is right, and indeed in the public interest, that we shall continue to preserve the prerogatives reaching down to us from the past, it is equally important that we appreciate the new situations as they arise. I am glad to think that our relations are harmonious with both the Government and other professional bodies with which we are associated.

The complexities of modern life have called for increasing governmental control in all departments of human activity. Large-scale experiments in many forms of socialized medicine, in many countries, bear witness to the intrusion of governments into our professional vocations, and it is not unreasonable to assume that, in shared experience, these experiments will continue to shape the course of the future.

In recent years, also, and in this country, we have seen the development of medical aid societies and organizations; some institutional, with government departmental encouragement; others through the vast ramifications of insurance companies.

Much thought is being devoted to these aspects of medicine by the Association, and it may well be that we have a contribution to make to this and similar problems.

Our internal affairs continue to be happily congenial and progressively well ordered. The Association is fortunate in its editorship and management of the *Journal*, in the service of its employed staff, and in the devotion of so many members who bring to its affairs their time and ability. A very special word of thanks goes to all of them.

And with that, I think, we can enter the New Year, as we always should enter it, with good hope and purpose for the future of an Association that means so much to all of us.

MESSAGE FROM DR. J. H. STRUTHERS

Chairman of Federal Council of the Medical Association of South Africa

As we stand on the threshold of a New Year I should like to invite you to look back with me for a moment to some of the happenings within our Medical Association.

I believe that our calling of medicine has made most of us jealous individualists. We feel, and quite rightly, that we would like to practice our medical art in the manner in which our conscience and beliefs dictate. But also, I think, many of us feel that this is no world in which to stand alone.

kan staan nie. Ons Mediese Vereniging het begin met die bevordering van die eer en belange van die beroep; in die loop van tyd het dit daarin geslaag om ons onderlinge afhankelijkheid te ontbloot, om ons gemeenskaplike belange te bevorder en ons loyaliteit te ontwikkel.

Daar was 'n brawe kring mediese manne met 'n gesindheid vir die openbare welsyn wat in die verlede veel tyd en diens daaraan bestee het om die Mediese Vereniging tot sy heden-daagse status op te bou. Ek wil veral verwys na dr. A. W. S. Sichel, wat 12 jaar lank Voorsitter van die Federale Raad was, en na dr. J. S. du Toit, wat 25 jaar lank as Tesourier van ons Vereniging diens gedoen het. Aan hierdie manne is ons ons dank verskuldig.

Oor die laaste paar jaar was daar aansienlike uitbreiding in die werk van die Mediese Vereniging, en sy diens aan lede dek 'n steeds aanwysende gebied. In die afgelope jaar is 'n Hoofkantoor van die Mediese Vereniging in Pretoria gevestig en dit het reeds sy sout verdien aan diens teenoor die individuele dokters in dié gebied en teenoor die subkomitees van die Federale Raad, asook in die bevordering van die beleid van die Vereniging.

En nou, terwyl ons die Nuwe Jaar afwag, besef ons dat daar baie en moeilike probleme vir die beroep voor die deur staan; maar die nuwe Federale Raad het reeds sy taak aangepak, en ek is daarvan oortuig dat dit die Vereniging goed sal dien.

Our Medical Association began by trying to foster the honour and interests of the profession; it has in due course succeeded in revealing our interdependence, fostering our kindred interests and developing our loyalty.

There have been a fine band of medical men of public spirit who have in the past given of their time and service to build up the Medical Association to its present position. Especially would I refer to two veterans of service who have this year vacated their office. I refer to Dr. A. W. S. Sichel, who was Chairman of Federal Council for 12 years, and to Dr. J. S. du Toit, who was Treasurer of our Association for 25 years. To all these we acknowledge our debt.

There has been very considerable development in the work of the Medical Association in the past few years, and its service to members has ranged over an ever-increasing field. A Medical Association Head Office has been established in Pretoria within the last year, and to the individual doctors in the area and to the sub-committees of Federal Council, as well as in furthering the policy of the Association, it has already proved its worth.

And now as we look forward to the New Year, we realize that there are many and difficult problems facing the profession; but the new Federal Council has already embarked upon its task, and I am sure it will serve the Association well.

VAN DIE REDAKSIE : EDITORIAL

AORTOGRAFIE

Hoewel dit reeds byna 30 jaar gelede is wat Dos Santos vir die eerste maal 'n ondeurstraalbare kleurstof in die buikslagaar ingespuut het, het hierdie nuwerwetse metode van inwendige buikondersoek maar slegs in die laaste 5 jaar 'n mate van byval begin geniet. Die voorstanders maak aanspraak op baie voordele. Afgesien daarvan dat die hele buik-distribusie van bloed waargeneem kan word, word die niere se bloedsomloop, en dus ook enige niersiektes, na bewering¹ duideliker afgebeeld op hierdie wyse as deur middel van 'n binneearse piëlogram. Dit is gewis nuttig om 'n afwykende nierslagaar met gevolglike bekken-ureterverstoping aan te toon, of om 'n nier wat deur siekte vergroot is te demonstreer. Daar is ook geen gelykstaande metode om buikslagaarverstopings te ondersoek nie. Ons belewe vandag die eksperimentele berekening van die plek wat aortografie in die diagnostiek sal inneem. Totdat hierdie saak beklank is, is dit raadsaam dat geneeshere nadink oor die gevare wat aan hierdie metode toegeskryf word.

Dos Santos het as kontrasmedium gebruik gemaak van 'n oplossing van joodnatrium, en sterfgevälle weens die gebruik daarvan is gerapporteer.² Die gebruik van die organiese jodide het betreklik meer veiligheid vir die niere gevestig, maar komplikasies word nog steeds gerapporteer. Die aard van die komplikasies dui daarop dat die gevare van hierdie operasie aansienlik verminder kan word deur meer noukeurige toepassing van die metode. Daar is eerstens die gevolge wat gepaard gaan met enige prosedure waar bloedvate binnegedring word, en die belangrikste is dié wat deur besering veroorsaak word. McAfee en Wilson³ meen dat by omtrent 3% gevälle bloeding rondom die nier ontstaan, en dat tussenwand-slagaarbreuk by ongeveer 1% gevälle voorkom. Beide

AORTOGRAPHY

Although it is almost 30 years ago that Dos Santos first injected a radio-opaque dye into the abdominal aorta, it is only in the last 5 years that this novel method of intra-abdominal investigation has enjoyed any measure of acceptance. Its advocates claim many advantages for it. Apart from visualizing the entire abdominal distribution of blood, the technique shows up the renal blood-flow, and therefore renal pathological processes, in a more definite manner (it is claimed¹) than an intravenous pyelogram. It is certainly useful in demonstrating an aberrant renal artery causing a pelvi-ureteral blockage, or in showing a kidney enlarged by disease, nor is there any equivalent examination for investigating intra-abdominal arterial obstructions. We are at present witnessing the experimental assessment of the place of aortography in the diagnostic firmament. Until it is finally determined, the medical profession would do well to occupy themselves with the dangers attributed to the procedure.

As a contrast medium Dos Santos used a solution of sodium iodide, and deaths from its use have been reported.² Introduction of the organic iodides ensured a relatively greater degree of protection to the kidneys, but complications continue to be recorded. They are of a pattern that suggests that a more carefully controlled technique will considerably reduce the risks of the operation. First, there are the sequelae common to any procedure in which blood vessels are punctured, the most important of which are due to trauma.

ontstaan weens besering, d.w.s. die naald word geskuif nadat dit in die binnerruimte van die aorta gedring het, of die inspuiting word herhaal. Blykbaar is dit nie so belangrik as 'n vervettingsplaat raakgesteek word nie. By na-operatiewe pyn in die sy en werklike verplasing van die nier word bloeding om die nier vermoed.

Veel ernstiger as besering is egter die gevolge wat ontstaan as te veel kleurstof in of die nierslagare of die boonste dermskeilslagare ingespuut word. Dit kan heel moontlik gebeur as die naald die aorta direk tussen die nierslagare binnedring of, in die geval van die boonste dermskeilslagaar, direk oorkant die lumen. Mislikheid, braak en buikpyn volg op 'n inspuiting in die boonste dermskeilslagaar, en daar is verslae van 12 sulke gevalle wat voorgekom het ná inspuiting van 70% diodone of natriumasetrosoaat in die bloedvate, dog daar was geen sterfgevallen onder die 12 nie.² Daar was egter 7 sterfgevallen onder die 37 gevalle van nierkomplikasies wat gerapporteer is sedert die gebruik van die organiese jodide, en by elke geval was die doodsoorsaak buisnekrose. By 2 pasiënte was daar voorafgaande nier- en nierbekkenontsteking en by 'n ander geval het die buisnekrose gevolg op die drukverlaging en langdurige bloeding veroorsaak deur die aorta-steek. Akute nierversaking met uriënvermindering ná hierdie prosedure het by 21 pasiënte voorgekom. By die meeste van hierdie gevalle is dit bevind dat die dosisse van die kontrasstof méér was dan 'n enkele inspuiting van 40 ml. van 70% diodone. Onlangs het die angiografie-span van die St. Mary-hospitaal in Londen hul eerste geval van nierversaking uit 500 aortogramme gerapporteer, volgend op die inspuiting van 60 ml. kleurstof in 3 inspuitings binne 30 minute.⁴ Ander werkers het dieselfde ongelukkige gevolge ondervind.⁵ Roy het onlangs in Glasgow 'n hidronefrotiese nier verwyder een dag na angiografie en hy het waargeneem dat daar duidelike skorsnekrose in die verwyderde nier was, en by die pasiënt het ernstige maar nie dodelike akute nierversaking ontwikkel.⁶ Hierdie patologiese verandering was sonder twyfel te wyte aan die ingespuite organiese jodide—'n feit wat reeds deur die Skandinawiërs beklemtoon is. Dit is nog nie duidelik of die letsel te wyte is aan 'n bloedvatkramp of aan die vergiftigende uitwerking van die jodide nie.

Ons kan verskeie afleidings maak uit hierdie voorvalle. Die prosedure van direkte translumbale aortografie hou maar altyd die gevaar van ernstige besering in, en die chirurg kan geen voorsorgsmaatreëls tref nie behalwe om redelik versigtig te wees. Maar daar is nou genoeg feite dat daarop aangedring moet word dat die hoeveelheid kleurstof wat tydens één operasie ingespuut word, beperk moet word tot 30 ml. Dit is gewis onverstandig om 'n te groot dosis toe te dien aan 'n pasiënt met net een werkende nier. Om die gevaar dat die normale nier in so 'n geval oorlaai word te vermy, is dit waarskynlik raadsaam om 'n retrograadse kateter in die dykransslagaar in te bring. Die kateter kan dan op die doek gevolg word, en dit kan dus voorkom word dat die inspuiting in die nierslagare of boonste dermskeilslagaar te lande kom. Oor die algemeen is retrograad-aortografie van die dykransslagaar waarskynlik veiliger as direkte translumbale angiografie.⁷ In elk geval, omdat 'aortografie slegs toegepas moet word om inligting wat nie anders bekom kan word nie te werf', is dit sekerlik 'n verstandige maatreeël om altyd die

McAfee and Wilson³ believe that a perirenal haematoma forms in about 3% of cases, and dissecting aneurysm probably occurs in about 1%. Both result from trauma, i.e., from moving the needle once it has entered the lumen of the aorta, or actually repeating the injection. Striking an atheromatous plaque is apparently not so important. Post-operative flank pain and actual displacement of the kidney suggest a perirenal haematoma.

Far more serious than trauma, however, are the sequelae arising from the injection of too great a volume of dye into either the renal or the superior mesenteric arteries. This is likely to occur when the needle enters the aorta directly between the renal arteries or, in the case of the superior mesenteric, directly opposite the lumen. Nausea, vomiting and abdominal pain follow superior mesenteric injection, and 12 cases have been reported following the injection of 70% diodone or sodium acetrizoate into the vessel, yet none proved fatal.² Of the 37 cases, however, of renal complications reported since the introduction of the organic iodides, 7 have been fatal, the cause of death in each case being tubular necrosis. In 2 there was pre-existing pyelonephritis and in another the tubular necrosis followed the hypotension of prolonged haemorrhage resulting from the aortic puncture. Acute renal failure with oliguria following the procedure occurred in 21 patients. In most of these cases it was found that the doses of contrast medium exceeded 40 ml. of a single injection of 70% diodone. Recently the angiography team at St. Mary's Hospital, London, reported its first case of renal failure in 500 aortograms, following the injection of 60 ml. of dye in 3 injections within the space of 30 minutes.⁴ Other workers have had the same unfortunate experience.⁵ Roy in Glasgow recently removed a hydronephrotic kidney one day after aortography and found well-marked cortical necrosis in the specimen, while the patient sank into a severe but non-fatal acute renal failure.⁶ This lesion was undoubtedly due to the injected organic iodide—a fact already stressed by the Scandinavians. It is not yet clear whether the lesion is due to vascular spasm or the toxic effect of the iodide.

Several inferences can be drawn from these incidents. The risk of excessive trauma is one inherent in the procedure of direct translumbar aortography and, apart from taking reasonable care, there is nothing that the surgeon can do to prevent it. But sufficient evidence has now accumulated to insist upon limitation of the total volume of dye injected at one operation to, say, 30 ml. To give an excessive dose in a patient with only one functioning kidney is distinctly unwise. Owing to the risk of placing the needle so as to overload the normal kidney in such a case, it would probably be wiser to perform a retrograde catheterization of the femoral artery. The catheter can be followed on the screen, and injection into the renal (or superior mesenteric) artery avoided. On the whole, retrograde catheterization of the femoral artery is probably safer than direct translumbar angiography.⁷ In any case since 'aortography should only be used to gain information that cannot be obtained otherwise,' would it not be a wise precaution always to test the

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toestand van die niere te toets deur 'n voorafgaande binne-aarse piëlogram en ander ondersoeke.

1. Annotasie (1952): *Lancet*, **2**, 671.
2. Wagner, F. B. en Price, A. H. (1950): *Surgery*, **27**, 621.
3. McAfee, J. G. en Willson, J. K. V. (1957): *Amer. J. Roentgenol.*, **75**, 956.
4. Dormandy, K. M., Joekes, A. M. en Sutton, D. (1957): *Lancet*, **2**, 18.
5. Riches, E. W. (1955): *Brit. J. Surg.*, **42**, 462.
6. Roy, A. D. (1957): *Lancet*, **2**, 16.
7. Sutton, D. (1957): *Brit. Med. J.*, **1**, 225.

integrity of the kidneys by a preliminary intravenous pyelogram and other investigations?

1. Annotation (1952): *Lancet*, **2**, 671.
2. Wagner, F. B. and Price, A. H. (1950): *Surgery*, **27**, 621.
3. McAfee, J. G. and Willson, J. K. V. (1957): *Amer. J. Roentgenol.*, **75**, 956.
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5. Riches, E. W. (1955): *Brit. J. Surg.*, **42**, 462.
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TRENDS IN AMERICAN MEDICINE *

EDWARD L. BORTZ, M.D.

The Lankenau Hospital, Philadelphia, Pennsylvania

The opportunity to visit this colorful† region is an experience which, believe me truly, will never be forgotten. Medicine is a universal science and art, and there are no national boundaries. Yet, one cannot but feel a warm kinship for others with a common language and similar objectives. I emphasize by identifying the individual and his family, rather than the state, as our primary concern. This detail is important because it raises the responsibility of the physician to a high plane for each patient, who is regarded as a sovereign being in his own right.

Mid-twentieth century is an appropriate time for a reappraisal of medical education and science. The school curriculum has been increasingly burdened with added information; yet, it is already overfilled with required subject material. The dilemma of medical education today, striving hard to equip the student with a sound and liberal education in a technical and specialized society, becomes more confusing as important discoveries bearing on health and the control of disease are added to the vast field of already existing knowledge.

It is unfortunate that the price of efficiency in the profession may separate the student from the deep sources of human happiness, with possibility of the loss of the broad qualities of mind and spirit which comprise the wisdom on which our future society depends. Intense concentration in a limited field with practical aims and techniques tends to defeat any intelligent ideal which society requires, thus further contributing to the confusion of the day.

Today medical education must reckon with the forces of a shifting social order. In shaping tomorrow's society, opportunity for medicine to contribute its understanding influence has been too often disregarded. The physician is in a unique position to understand, not only the health and medical problems of his clientele, but to learn the interests, hopes and fears of those he serves. The physician, in addition to his professional activities, enjoys the privilege and also the obligations of citizenship. In the States members of our

profession are frequently called upon to participate in community affairs.

OBJECTIVES IN COMMON

While medicine is in a state of ferment, and new ideas and bold experiments are being introduced in our medical schools, the old familiar teaching patterns and courses are being altered. Programs of instruction in the various courses are in process of re-examination. The impression exists that, in concentrating on minutiae of bacteria, electrolytes, steroids—all important—there has been neglect of the patient himself. The principal objective of medical science has never changed—to equip the aspiring student with the inter-personal skills and warm human understanding of the family doctor just as thoroughly as he has learned the techniques of the laboratory.

American medicine is now in a healthy transition of bringing more psychiatry, anthropology and sociology within the student's sphere of study. Likewise, it is recognized that in a 4- or 6-year period of training only the basic data and subjects can be learned. The student must continue to seek understanding as he grows in experience in a rapidly changing world. To technical proficiency must be added the understanding, sympathetic heart.

NATIONAL MEDICAL NEEDS

The content of medical practice has changed in the past several decades (Table I). This is due to discoveries such a

TABLE I. LEADING CAUSES OF DEATH IN THE UNITED STATES

1900	1950
1. Tuberculosis	1. Heart
2. Pneumonia	2. Cancer
3. Enteritis	3. Accidents
4. Heart	4. Cerebral Hemorrhage
5. Nephritis	5. Nephritis
6. Accidents	6. Pneumonia
7. Cerebral Hemorrhage	7. Tuberculosis
8. Cancer	8. Premature Births
9. Bronchitis	9. Diabetes
10. Diphtheria	10. Arteriosclerosis

insulin, liver for anemia, the sulfa drugs and antibiotics. An appreciation of the stresses and strains, causing tissue

* A paper presented at the South African Medical Congress, Durban, September 1957.

† American spelling retained throughout.

deterioration, has also been a factor. Physical exhaustion sets the stage for disease and disorder; witness the appearance of diabetes from overloading, hypertension from drive, occlusion and hemorrhage; there are known predisposing forerunners of these catastrophes which are only now being identified. In 1956, with a national population of 160,000,000, some 880,000 deaths occurred from circulatory pathology, (arteriosclerosis, thrombosis, coronary occlusion and hypertension). Cancer caused a loss of 206,000 lives; accidents, home and highway, are third on the list (Table II). Our

TABLE II. MORTALITY RATE, US, 1953

Heart	826,890
Cancer	242,430
Accidents	91,270
Pneumonia	25,000
Tuberculosis	15,580

hospitals are filled mostly by patients with vascular lesions, cancer, the arthritides, and mental disorders.

National programs are receiving generous financial support from industry, the foundations and the government.

There are somewhat less than 200,000 doctors available for all needs, teaching, research and practice. While there is a ratio of one doctor for each 750 persons, the tendency of the profession to settle in population centres has caused a lack of practitioners in many rural areas. This is now being corrected by improving facilities in these localities.

In the last 25 years the number of medical schools has increased from 76 to 82. The total enrollment in 1930 was 21,982; in 1955 it was 28,748. In 1955 7,686 students entered first-year classes. You may also be interested to know that 16% of students had an 'A' average in Arts and Science preparing for medical school; 70.6% had a 'B' average and 14.10% had a 'C' grade.

Our faculties for pre-medical teaching focus on the arts and sciences, hopefully designated as cultural and scholarly pursuits. The professional school is vocational and practical. This sharp division has given rise to an undercurrent of dissatisfaction. Highly technical requirements of professional training permit little time for the humanities—yet these are beginning to force their way into the curriculum. Society needs specialized sciences, but furnished by those with an appreciation of human relationships. Two of our universities, Florida and Vermont, are experimenting with a new plan in Health Sciences. Selected students are being encouraged to carry on liberal, pre-professional and professional studies in parallel with a gradual focus toward strictly professional studies. Only in the final 2 years is training limited to patients and their diseases. As the medical career is a life-long discipline, a way of life, the introduction in school years needs to inculcate a philosophy and training in subjects of which the details can only be learned with years of experience.

ACADEMIC MEDICINE

The need for qualified teachers is always acute. It is only recently that training for a teaching career has been awarded the attraction it merits. Principles of education are now being offered as a subject for preparation for teaching in several schools. The University of Buffalo has a full-scale program, designated officially as The Buffalo Project in Medical Education.

The majority of medical-school faculties are continually searching for ways to better coordinate and systematize the basic sciences.

Harvard has been experimenting with a unified program of teaching in Basic Medical Sciences in preparing students for careers in research and teaching. By the cooperation of strong departments this program has been enthusiastically successful. Now the Harvard faculty has re-arranged the training program of the first 2 years for medical students as follows (Figs. 1 and 2):

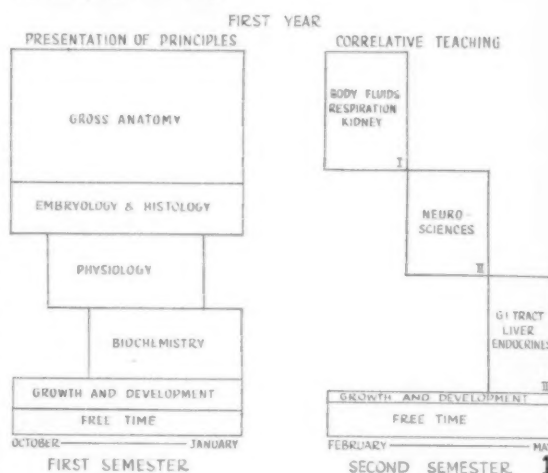


Fig. 1. The arrangement of course material in the first year. In each semester the sequential arrangement of the course material is presented. The area of each block in each semester diagram represents the relative amount of time allocated to each subject. Comparisons of time allocated to topics may be made only within each separate semester diagram, but not between diagrams.

Growth and Development

The introduction of a new course intitled Growth and Development, to include genetics, statistics, embryology, and somatic and psychic development from infancy through adolescence, adulthood and old age, is evidence of an important new dimension appearing in medicine. This will encompass growth and development including individual and social psychology. The Harvard faculty committee regards this as an important innovation. It testifies to an appreciation of the broad sweep of the human life span as the main current of experiences each individual comes to know. There is a sequence of events beginning at conception and unfolding in a beautiful and rhythmic pattern, through various phases of growth, development, maturation and senescence. From these phases one can conceive of a master plan with all of its amazing intricacies bearing on the biological and social aspects of human growth and development. One sees new dimensions appearing from this vantage point, which represents an endeavor to see the individual as a whole. Some years ago, the Harvard anthropologist, Ernest A. Hooton, pointed out that medicine, by originating its studies at the autopsy table and working backward was thereby concerning itself mostly with disease and error. In his way of reasoning, he recommended that students of biology, in which group

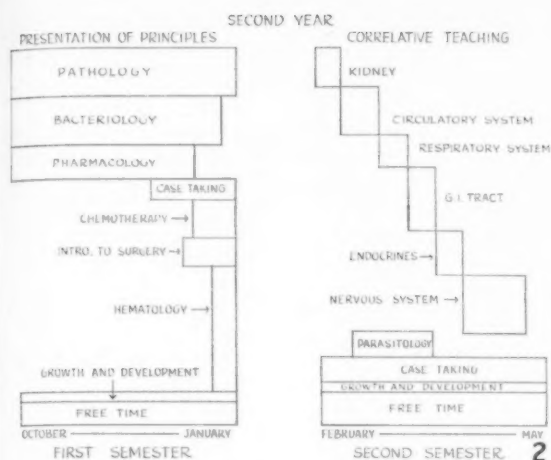


Fig. 2. The arrangement of course material in the second year. The diagrams are of the same nature as those of Fig. 1. In the second semester, the correlative teaching consists of a large course in the Mechanisms of Disease, outlined in the text. The various systems will be treated as shown. Case Taking and Laboratory Diagnosis will be closely correlated with the discussion of diseases of the various systems. The section on hematology shown in the first semester is actually a part of the course in the Mechanisms of Diseases—i.e., there is some overlap of the subject matter of the two semesters.

he included the medical profession, should more rationally start with the normal fertilized ovum and proceed through the various unfolding stages of human growth. This comment now begins to make sense.

As medicine continues to grow in science and practice, the boundaries of practice are extended beyond the diagnosis and treatment of disease. For example, in pediatrics emphasis is now being directed to the normal development of the growing child. Our dental colleagues have, for years, trained their clients in the advisability of protective practices. Through the various specialties there is now increasing emphasis on the maintenance of health and the avoidance of practices which tend to undermine it.

SOCIAL COMPONENTS

The aches and pains and nuisance complaints which move the public to the physician's office often reflect the final stage of a train of symptoms which may have been building up for a considerable period of time. The key to successful medical care, and the search for abundant good health, exists in the correct identification of the first deflection from that vague and not too well understood state of affairs known as being in sound health. We teach our students to question the patients in detail and to search out these first causes.

Ill-health due to the ordinary infections, nutritional indulgences, accidents and common exhaustion states is readily recognized.

There are other influences continually functioning in man's relationship to his biological and social environment which condition him and determine in large measure how he will react to a specific disturbance. Medicine is coming to regard human ecology as an important study. This brings

into view the individual and his social setting and his relationships with other members of his family and the community in which he functions. The play of community interests, the drive of the individual at work, his defeats, frustrations and losses, all these, we all admit, may have a profound influence on the external environment.

The sensitive practitioner comes to know these imponderables as he gains experience and over the years comes to know his patients and his patients' families. Somehow, it seems to be more of an art than a science. These changing tides by their fluctuations affect the patient for good or ill, and make certain impressions upon the mind of the family physician. His judgement of them which, for want of a better term, is called intuition, represents years of experience and friendly contact with his patients and their problems.

This folksey personal touch has been lost in the high-pressure rapid expansion of laboratory diagnosis, but there is evidence, over the land, that it is coming back into its own.

NUCLEAR RESEARCH

In mid-twentieth century we are now embarked in the atomic age. Unique events are re-shaping the very structure and function of society. In science a noted pathologist observed that the development of the radio-active tracer technique, with the use of isotopes experimentally, is an event equal, potentially, to the discovery of the microscope. Some time ago a report from the Atomic Energy Commission stated that, 'radio-active isotopes are priceless in the humanitarian war on cancer and other man-killers. In research they behave like tiny radio stations, moving through scientific experiments and broadcasting the inner nature of the phenomena which they witness'.

Here is a tool and technique that already is sharpening diagnosis of tumors, is revealing hidden secrets of nutrition, hormone action and the pharmacology of chemicals. It bids fair to revolutionize our knowledge of body structure and function.

This technique is rapidly being pressed into service in all of our schools. It promises information concerning the aging of tissues and organs that may well lead to a spectacular increase in human longevity. The United States Atomic Energy Commission is now making all kinds of radio-active materials available for study and research to nations all over the world. The nuclear age is here.

HEALTH HAZARDS OF NUCLEAR POWER

As a medical officer with the American Marines who entered Japan shortly after the atomic bomb reduced Nagasaki to a harbor of desolation, I was awe-struck by the extent of the destruction produced by a small bomb. That was in 1945, a short time ago. Since then, scientists and statesmen have been probing further and further into the mysteries of cosmic power. As Americans our people are becoming increasingly apprehensive about the dangers of radio-activity and fall-out of stratosphere particles from H-bomb detonations. There is much discussion in our press and many citizens are deeply concerned, not without cause, concerning the ultimate effects of future generations.

Our pediatricians, many of them, are worried. They suspect a creeping menace in the slow accumulation of radiostrontium, some of which has already been recovered from the ash of children who have recently died. Since the

detonation of a number of H-bombs, a new element of radio-activity, which can be measured, is being found in human beings.

While the technical structure of radiation is beyond my ken, a few basic ideas are helpful. A roentgen is the unit of measure: a milli-roentgen is one-thousandth of a roentgen. A sunshine unit is the amount of radiostrontium (Sr90) per g. of calcium. Radio-activity is measured in curies.

The sunshine unit (named from United States Project Sunshine), is one one-thousandth of the maximum permissible dose of radiostrontium. Concentrations of 0.5-2 units have been recovered from bodies. We are informed that detectable radio-activity is in all the food we eat. In milk, cheese and canned food evidence of activity from fall-out particles exists.

When a bomb explodes, its dust becomes radio-active, i.e., capable of tissue destruction. While most radio-activity decays in minutes, hours or days, others (especially radiostrontium) has a half-life of 20 years. Therefore this dust, thrown into the stratosphere and wafted by air currents, may travel long distances. Finally it precipitates *via* mist or rain to the earth. Here it is incorporated in grass, vegetables and water for human and animal consumption. Radio-activity as described by Dr. Ernest C. Pollard, of Yale University, acts like a super-chemical. It is super-reactive and super-potent. A radio-active particle within the human body may act on the genes within the chromosomes of reproductive cells, thus producing a mutation unfavorable to the future cell structure.

The genes are made up mostly of deoxyribose nucleic acid and a base protein, usually a histone, together with some ribose nucleic acid and a small amount of non-basic protein. Our geneticists believe that nucleic acid, particularly deoxyribose nucleic acid, is the primary hereditary carrier. There is an exquisite and exact chemical pattern and progressiveness in the unfolding development of the young body. Mutation—an alteration—which is occasionally spontaneous, may not be harmful; in fact, may prove beneficial; this occurs from the action of radio-active particles on the chemical pattern of the genes. The alterations may be either microscopic or sub-microscopic in type. When the chromosomes are damaged, new forms appear. It has been shown experimentally that in animals the male germ cells during meiosis are more susceptible to radiation than male cells or female cells. Radiation doses are cumulative in effect. Also, neither the intensity nor duration makes any difference. Even the lowest doses are harmful, for there is no threshold. When a mutation has been produced by radiation and transmitted to the population, it continues through generation after generation until reproduction fails. While it is known that two sets of genes exist, if one is still intact continuity may be possible. Nevertheless, any radiation effect is genetically undesirable.

Radiation leukemia is a known hazard. X-rays of a fetus before birth increases the possibility of subsequent blood dyscrasia to leukemia.

Improved methods of screening, plus faster film, may reduce the hazards of diagnostic radiography. The problem of fall-out hazard will not be solved until some method for control of radio-active dust is worked out. Meanwhile, society is exposed to rapidly increasing hazards leading to a marked increase in defective infants and a statistical increase in the number of persons developing leukemia.

Is the calculated risk of accumulating more and more radiation hazard sufficient to stay the plans of statesmen as they plot designs for more and more powerful cosmic weapons? On the answer to this question may hang the future of tomorrow's world.

THE PRACTISING CAREER

The almost limitless number of specialized fields which comprise biology, anthropology and sociology, each with its particular pertinence to medicine, necessitates a choice by the student. Teaching, research, practice—these all need recruits.

Specialization is recommended only after a minimum of 3 years of general medicine. In practice, natural interests will crystallize. Then further training *via* residency or fellowship in one of the centers is required.

The changing character of general practice is the result of a great many substantial advances in our knowledge of cause and effect. The efficient diagnostic procedures which now enables the practitioner to identify the offending cause, coupled with the remarkable therapeutic agents, has increased the physician's ability to serve his clientele. So many technical procedures are involved, and the number of personnel required for diagnosis and therapy has increased so much, that the rendering of medical care has tended to become impersonal. This has, from time to time, brought reprobation on the profession in the States. There is the yearning for 'the good old days' by families whose elders knew the consolation of the family doctor, particularly in hours of deep bereavement. There is justice in this comment. The physician cannot neglect the personal touch. Our public needs it.

The tendency towards specialization in the States, with some 60% of graduates pointing for careers as specialists, is a trend which many hope will diminish. The major need is for well-trained general practitioners. Encouraging signs are now appearing. A number of the medical schools which are State-supported are subsidizing qualified students with the understanding that after graduation they will be available as general practitioners within the state. This plan, within the next decade, should bring balance and a much better distribution than now exists.

THE SPECIALTY BOARDS

In the last 25 years some 16 Specialty Boards have been created. These have been set up to evaluate the proficiency of applicants to qualify as adequately trained in a particular field. Admission to examinations is limited to individuals who have spent 3 or more years in basic sciences and clinical work under recognized teachers. On successful examination the applicant is given a certificate. This has no legal significance; its only meaning is indication of advanced training. The prestige of certification has made it an objective to be gained, but a number of faculties question this procedure as unnecessary and disregard the practice.

At the present time in the States, the question frequently arises, when positions on hospital staffs are open, concerning the qualifications of those aspiring to appointment. As the trend towards the selection of those certified to perform difficult surgical procedures is growing, non-certified doctors, even though adequately qualified, are at a disadvantage. In general, it may be stated that recent graduates are cog-

nificant of these developments and are planning their future course accordingly.

GOVERNMENT IN MEDICINE

In addition to the medical corps of the Armed Forces, the United States Public Health Service has, in the past two decades, greatly expanded its activities. There is close and understanding cooperation between civilian and governmental branches in medicine.

In the National Institutes of Health in Bethesda, Maryland, there are a number of centers for research in diseases of the circulation, cancer, arthritis, and nervous and mental disorders. Under government subsidy these Institutes have attracted many brilliant young men in science. Fellowships and traineeships are always available for qualified students.

There has been a remarkable awakening of the national interest in problems of health and medical science. The Surgeon General of the Public Health Service, Dr. Leroy Burney, has set up a department to stimulate interest and support in research in problems of aging. Greater attention is being given to long-term illnesses and the causes of premature break-down. On this basis, it may be predicted that, with control of vascular break-down and cancer, another substantial increase in human longevity is to be expected. This is already causing sharp repercussions in industry, labor and, in fact, in all walks of life. For, in order that these added years be lived with personal vigor and social competence, many long-standing but outmoded practices, such as retirement at a chronological age, will need be re-evaluated. Medicine must contribute its best thinking to this new field.

THE AMERICAN MEDICAL ASSOCIATION

The American Medical Association, with some 160,000 members, celebrated its Centennial in 1947, an event distinguished by the presence of many of your leaders as well as representatives from other nations.

A word about organization: Each county in each state has its local organization of doctors who are licensed to practise. These are the units of the state medical society, which in turn constitute the fabric of the American Medical Association. Any physician who is a member of the county society may, through channels, carry any question directly to the top echelon of American medicine. In its House of Delegates, as with yours, there is open debate and sharp discussion; issues of education, research, financial support and relationship to industry, labor and government are studied with great intensity. The American Medical Association is a militant organization dedicated to the high ideals of medical science. Any encroachment on freedom to practise

in the best tradition is met with a strong and unified energetic resistance.

The American Medical Association has many studies under way. It supports research and education generously and is always ready to alter any policy or procedure when an improved way of action is solidly proven.

The vexing problems bearing on costs of education and service are being studied by a corps of experienced workers. Experiments with many forms of voluntary insurance have been encouraged. The American Medical Association, thus far, has been able to find no convincing evidence that governmental control is less expensive or that it promises, in our country, a better service for the public.

Probably the field of greatest activity in which the American Medical Association is engaged is that of Postgraduate Education. Through its several councils it is continually offering facilities for further study. The annual session in June attracts distinguished visitors from the far corners of the world.

The A.M.A. is promoting the dissemination of scientific information by television, radio and other media over the entire nation. Closed-circuit telecasts, arising from the various medical centers, offer discussions by authorities on topics which are the common concern of the profession. Colored television has become popular and the profession has benefited greatly from its use. It is safe to predict that in the near future there will be a continuing postgraduate educational program extending to practically every community at yearly intervals.

OUR CHANGING CULTURE

It was Descartes, I believe, who observed that, if ever mankind is to progress, biologically, socially and intellectually, the science of medicine will perform that service. Those of us who have participated in two world wars, and have watched the rapid and often terrifying changes in various nations, should pause in prayerful attitude concerning tomorrow's world. The amazing power of nuclear energy is being fashioned into weapons of great destructible potential. Yet this same power, harnessed for man's needs, might reduce the threat of famine, pestilence and deep human suffering.

Of even more exciting promise—by using new techniques for scientific investigation man is now close to the solution of many diseases which have, for so many years, destroyed millions of lives.

In the field of biological engineering, we need to use creative imagination and intellectual daring. The unique privilege of the man of medicine is that he may play a commanding role in fashioning tomorrow's world.

THE DERMATOLOGIST AND RADIOTHERAPY*

L. J. A. LOEWENTHAL

Johannesburg

The subject under discussion is a complaint which is still made sporadically by radiologists in many countries and concerns the use of radiotherapy by dermatologists.

* A paper read at a combined meeting of the Dermatology and Radiology sections of the South African Medical Congress, Durban, September 1957.

The bald statement, 'Dermatologists should not use radiotherapy', is sometimes modified to propose a maximum dosage which a dermatologist may safely use, and at other times to specify the type of lesion which he may be trusted to treat; as a result, among other absurdities, one radiologist has stated that

the skin specialist should not be allowed to use X-rays for benign dermatoses, and others maintain that the dermatologist may be permitted to use X-rays for benign dermatoses, which require small doses, but should on no account be allowed to treat malignant skin conditions.

I hope that a statement of the respective views of skin and radiation specialists, under the rules of polite debate, may lead, in this country at least, to an understanding of each other's point of view and to a lengthy truce, if not to a peace treaty. In the discussion let us resolve at the outset that the patient's welfare is our only consideration. Let us determine that the prestige of our respective specialities and the motive of financial gain shall be excluded and that our deliberations shall be guided by reason rather than by pride or cupidity, and that the phrase 'to give X-ray therapy' shall not be a euphemism for 'to sell X-ray therapy'.

In defending the dermatologist's position I would point out, in the first place, that the radiologist's attacks are usually made by word of mouth, or by innuendo. Only two printed accusations have come to my notice in recent years, and each has some peculiar features. The more important case concerns an interview given to reporters of *The Chicago Tribune* and *The Chicago Sun Times* by W. E. Chamberlain, the chairman of the Executive Committee of the American Roentgen Ray Society. In this interview he stated that 'X-ray therapy should be given only by radiologists' and 'top men in dermatology are discontinuing such practices' (i.e. the use of radiotherapy by dermatologists). These reports drew a request for explanation from the American Medical Association's *Archives of Dermatology*. In a lengthy reply Dr. Chamberlain¹ attempted to justify his statements. He refused to name the 'top men' in dermatology who were giving up radiotherapy; 7 eminent dermatologists² showed by their replies that they were not the 'top men' referred to, and in the 2 years that have elapsed there have been no reports of dermatologists being animated by what Dr. Chamberlain called 'his crusading spirit', and throwing away their X-ray therapy outfits.

Dr. Chamberlain attempted to justify his press interview by referring to catastrophic results he had personally seen though, no doubt through an oversight, he did not state that the treatments had been administered by dermatologists. He attributed these catastrophes to three causes, viz. (1) accidental over-exposure, (2) inaccurate or incomplete knowledge of the patient's previous exposures to irradiation, and (3) lack of appreciation of the significance of the interval between exposures.

Two of the 'top men' in dermatology promptly asked what reason there was for Dr. Chamberlain to assume that accidents are less likely to happen with the radiologist than with the competent, well-trained dermatologist;³ and why a radiologist should be the more adept at eliciting a case-history. The third point was answered by referring to a previously published 20-year follow-up of more than 600 patients treated by dermatologists, in none of whom were dangerous or even disagreeable sequelae to be found. Dr. Chamberlain did not reply.

The second printed attack on dermatologists who practise radiotherapy could not be taken so seriously but had a greater appeal to the connoisseur of the ludicrous. It appeared as a letter in a reputable medical journal in this country, over the signature of a well-known radiologist. The circumstances which prompted this letter were as follows: Another radiologist had published an article on therapy and detailed his dosage schedule for the treatment of foot ringworm, or 'athlete's foot'. He added the surprising statement that this dosage was sufficient to kill the fungal spores, ignoring the fact that fungi survive enormous doses of X-rays and that the success of X-ray epilation in ringworm of the scalp depends upon its effect on the patient's hair and not on any lethal effect on the fungus. This was pointed out in a letter from a dermatologist and this in turn elicited from the first-mentioned radiologist his attack on skin specialists who use X-ray therapy. Observe now that the argument has completely changed. The first radiologist and his views on the effects of X-rays on the fungus of foot ringworm are forgotten, and a new subject is flashed before us with the skill of a matador who, by a twist of his cape, lures the bull away from his wounded comrade. And, like the matador's cape, the glittering arguments which the radiologist presents are attractive, elusive—and without substance.

* In the USA, in any case, it is common practice for both the radiologist and dermatologist to leave the actual treatment to trained technicians.

We were given an impressive list of countries in which (so he had been informed) the dermatologist is either forbidden to use X-ray therapy, or is limited to using it in small doses. Personal enquiry in many of these countries has convinced me that the radiologist's leg had been pulled with incredible ferocity. At a meeting of the International Committee for the Education of Dermatologists last month 39 out of 41 participant countries stated that the dermatologist had the right to practise X-ray therapy. Requirements for whole-time training in X-ray therapy for dermatologists have been defined and are in force in 15 countries; in others, such as the USA, part-time training in radiotherapy extends over 3 or more years and candidates for a diploma in dermatology have to show their competence in this subject.

DERMATOLOGISTS AS PIONEERS IN RADIOTHERAPY

The facts are, of course, that dermatologists have used radiotherapy since before the speciality of radiology was born, that the first attempt to use X-rays as a logical form of treatment was made by a dermatologist, and that dermatologists have been, and are still responsible for many advances in radiotherapy in many countries, including those which allegedly refuse them permission to use X-ray equipment.³

I shall permit myself to elaborate on the foregoing statements. The year 1896 saw the first attempts at X-ray therapy. Grubbe and Despeignes irradiated one cancer case each, respectively of the breast and stomach and are thus entitled to priority as radiotherapists. But the first reasoned use of X-rays as a therapeutic measure was made by the dermatologist Freund in the same year; having observed accidental epilation after exposure to X-rays he attempted to use this known effect to procure epilation in a hairy mole. Among the names inseparably associated with the progress of radiotherapy of the skin in its early years, that of Sabouraud retains a well-deserved eminence. This great dermatologist not only conceived and practised the first epilation cure of scalp ringworm but, in association with Noiré, introduced the pastille dosimeter which for many years, used in conjunction with the Holzkecht dosage scale, played a leading part in the development and practical use of X-ray therapy.

Among the many pioneers whose work was of the greatest importance in the early part of the present century, the names of Freund, Hans Meyer, Belot, Brocq, Adamson and Sequeira in Europe, and of Pusey, McKee and Stelwagon in America will remain a source of pride among dermatologists. Among those living I need mention only Miescher, Belisario and Witten as examples of dermatologists who have engaged in fundamental research on the physiological as well as the therapeutic aspects of radiation.

If the foregoing gives you the impression that dermatologists have been the only workers in this field, then I must apologize; what I want to bring to your notice is that the dermatologist has taken his rightful place alongside the radiologist, physicist and physician in the development of radiation therapy.

Training of Dermatologists in Radiography

The opinion of dermatologists everywhere is that the proper training of a dermatologist includes training in radiotherapy, and that the properly trained dermatologist is a suitable person to administer radiotherapy. I also wish to make it clear that no responsible dermatologist would suggest that radiotherapy should be used by those whose specialist training has not included adequate instruction in this subject; I associate myself with those who would forbid the use of radiation therapy to dermatologists not specifically trained in this method.

The recommendations of the International Committee on Education of Dermatologists, on which I serve, are that a minimum period of 3 months' full-time instruction in radiotherapy should be given. This is in addition to the recommended course of 3 years' postgraduate training in dermatology and 1 year's general medicine. As it happens, this fits well with existing practice in many countries; in addition, there is ample opportunity for the postgraduate trainee to follow cases through the radiotherapy department of his own skin clinic at any time during his 3 years' training. These radiotherapy departments are always under the direction of a dermatologist who acts under the professor of dermatology. Those which I have recently inspected, in 4 countries in Europe, are similarly equipped; they contain 5 or 6 X-ray machines, ranging from the old-fashioned Grenz-ray apparatus to a machine working

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on 180 kv, with which regional metastases can be irradiated, and invariably include a Chaoul-type apparatus and one or more multi-purpose beryllium window machines of the 'Dermopan' type. In addition, thorium-X is fairly widely used and in several skin clinics radium is in use. Radio-active isotopes are also being employed by dermatologists, both in Britain and on the Continent, for research and treatment. The use of radio-isotopes in dermatology formed a principal theme for discussion this year both at the Annual Meeting of the British Association of Dermatology and at the XIth International Congress of Dermatology in Stockholm, both of which I attended.

The Radiologist treating Skin Diseases

Now let us briefly consider the radiologist's claim to be the right man to treat skin diseases. In the first place, as Sulzberger and Witten² have pointed out, the dermatologist specializes in an organ, the radiologist in a modality, so that the latter's minimal knowledge of the skin which he is treating has to be weighed against the former's relative ignorance of radiological machines. It seems unreasonable that a radiologist should be considered competent to diagnose a dermatosis and decide on the details of its treatment, or check its progress during therapy when he knows little of its natural evolution and involution. Thus it happens that one learns of radiologists treating conditions which are quite unresponsive to their therapy, such as foot ringworm, or even conditions which may be made considerably worse, such as lupus erythematosus.

The second criticism we have is the unsuitability of the X-ray equipment generally used by the radiologist for the treatment of skin conditions, in that they rely largely on heavily filtered penetrating high-voltage radiation which is delivered to deeper structures where it is not only unnecessary but potentially dangerous.

Since Bucky's original introduction of the Grenz ray in therapy, the practical development of radiation specifically suited to the treatment of various dermatoses has been, with one exception, entirely the work of dermatologists and technicians. The exception is of course the notable advance achieved by Chaoul with contact therapy for cutaneous cancer. Before the last war dissatisfaction had been felt with the type of apparatus used for skin therapy; it was Schreus⁴ who first clearly enunciated the principle that the logical therapy of skin diseases should be envisaged as primarily a question of skin layers. It has thus happened that the half-value layer in tissue has replaced the half-value layer in metal as the crucial measurement in the selection of the most suitable form of radiation. This was a purely theoretical concept until the construction of the beryllium window X-ray tube in the Machlett laboratories a few years later made it possible to utilize the range of radiation generated at any point between 10 and 50 kv.

Dermatologists naturally availed themselves eagerly of this new range of radiation, which they had previously demanded and now received, and the progress of skin X-ray therapy in this decade is recorded in a flood of publications from the pens of dermatologists. The doctrine that the affected layer of skin should determine the type of dosage used has of course made it more than ever desirable that it should fall to the dermatologist to select the therapeutic regime, for his interpretation of the depth of the pathological process is now the most important factor in determining not only the amount of radiation that is desirable, but its quality. His knowledge of dermatology will in most cases enable him to state that a certain dermatosis is located in, for example, the first millimetre of the skin; in other cases, as for instance basal cell epithelioma, he will be able to determine after examining a biopsy specimen, that the effective dosage of X-ray need act only in, say, the first 3 mm. of tissue. Is it fair to the radiologist to expect him to select the optimum dosage factors in this way, when his knowledge of dermatology is presumably that with which he graduated?

As an example of what the dermatologist has achieved with the beryllium window tube I must also mention Schirren's development of a comparatively harmless type of whole-body irradiation.⁵ He has found that unfiltered rays generated at 50 kv. are able to act at a distance of 2 metres with a dosage rate high enough to irradiate the whole body adequately in a few minutes. Many forms of widespread, superficial dermatosis have been treated in this way, and in some of the malignant reticulososes it appears to be the treatment of choice. As the quality of radiation delivered has a half-value layer in tissue of only 2 mm. it is not surprising that no immediate ill-effects are experienced from this type of

therapy, and that repeated blood counts do not show the slightest change during or after such therapy.

CONCLUSION

I would sum up by submitting to you the following points:—

1. The properly trained dermatologist, given the right equipment, is best fitted to use radiotherapy where indicated in skin diseases.
2. If he is unwilling to do so he is to be acknowledged competent to discuss details of radiotherapy with the radiologist.
3. The radiologist whose patient comes direct or from a colleague other than a dermatologist should treat only cases in whom the diagnosis is not in doubt, confirmed if necessary by histological or other examination. Furthermore, he must know that radiation therapy is indicated, as well as the type of dosage and radiation which is most suitable. In all other cases he should seek expert opinion.

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DISCUSSION

Dr. F. N. Gillwald, of Welkom

Dr. Gillwald said he felt that the dermatologist and radio-therapist were in no way competitive. On the contrary they were complementary. The dermatologist with his intimate knowledge of skin pathology played an important part in diagnosis and assessing the response to treatment. The radiologist, on the other hand, had an equally intimate knowledge of the biological and physical properties and effects of radiations as well as their beneficial and harmful potentialities. In private practice where the dermatologist's and therapist's rooms might be far apart, close cooperation between the two specialists might be an inconvenience to the patient but in large departments and institutions close co-operation should be the rule. Dr. Loewenthal's remark that in Continental clinics the dermatologist was found in the X-ray department with his microscope and other equipment at hand obviously represented the ideal.

Dr. John Leeming, of Durban

Dr. Leeming suggested that one of the biggest problems, especially in private practice, was that the radiologist in many cases had patients referred to him by the GP undiagnosed but with a request for X-ray treatment. The GP knowing that certain conditions were benefited by X-ray therapy, did not always appreciate the importance of an accurate diagnosis and an assessment of the suitability for X-ray treatment. An unfair burden in such cases was thrown on the radiologist and in all such cases it was considered very much more satisfactory that they should be referred to a dermatologist who, if it was considered necessary, could then carry on the treatment. Dr. Leeming also asked whether it was not true that the tendency among dermatologists in Europe was, in the ordinary superficial range of therapy, to use smaller doses. Miescher, of Zurich, claimed that in many of the superficial dermatoses he was getting as good results with 75r. per dose as with the 100r. he was previously using.

Dr. Ivor Fix, of Durban

Dr. Fix said he had listened with interest to Dr. Loewenthal's absorbing, if provocative, paper. Radiotherapists were prepared to concede that dermatologists might know something about X-ray machines. They felt, however, that dermatologists should extend the same courtesy, and concede that therapists might know something about skin lesions—malignant ones at any rate. He wished to raise a point concerning depth dose. Dr. Loewenthal has dwelt at length on the quality of the beam—the half-value layer and filtration—and its role in penetration. Dr. Fix said that an even more important factor was the focal skin distance used, and that the value of superficial machines was dependent on their being used at very short focal skin distances. He therefore found it difficult to understand that, with the integral dose received in whole-body radiation at 2 metres, no systemic effect resulted, even if the X-rays used were generated at low energies, i.e. d₁ in

skin being 2 mm. at normal fsd. He could only assume that the dosage was exceedingly low. Dr. Fix went on to say:

'No thinking radiotherapist, I am sure, could have any objections to a dermatologist using ionizing radiations therapeutically, if the stringent requirements laid down by Dr. Loewenthal were met by *all* dermatologists, i.e. a thorough knowledge of the production of electro-magnetic radiation, the interaction of these rays with human tissues and the basic radiobiology necessary for an understanding of the phenomena following irradiation; and, further, that he is well versed in the health hazards involved in using X-ray apparatus and radio-active substances, and is in a position to assure adequate protection to those receiving and those administering the treatment. I must point out the difficulty in bringing about these ideal conditions. I think Dr. Loewenthal must agree that it would be exceedingly difficult to enforce these requirements on practising dermatologists, and as difficult to ensure that prospective dermatologists acquire this knowledge before embarking on the practice of the speciality. Legislation of this type in Medicine is always undesirable, and we must, therefore, rely on the good sense of the practising and prospective dermatologists who do not meet these requirements not to use the modality. In conclusion, apropos of Dr. Loewenthal's observation that the specialist in the organ, as opposed to the specialist in the modality, is best qualified to treat a condition affecting this organ, I have still to hear dermatologists clamouring to treat those skin conditions which are amenable to surgery.'

Dr. Fix said that the 'protection bogey' had not been raised by the radiotherapists but by the lay press.

'However,' he continued, 'the crux of the matter is that it is only fairly recently that the significance of cumulative radiation and genetic damage, with consequent deleterious mutation, has been appreciated. This, taken in conjunction with the significant increase in our background radiation, has given rise to the dictum that all unnecessary radiation is dangerous radiation, especially in those occupationally exposed to ionizing rays.'

'As regards the "high" doses used by radiotherapists, I would like to clarify one point. A bald statement of a dose as a number of röntgens has absolutely no significance, unless the time over which this dose is spread is stated. There is a considerable difference in effect in, say, 2000r. given in a single exposure and in the same dose given over a protracted period.'

'Admitting that my experience of treating skin lesions is confined in the main to malignant conditions, I would like to reiterate some well-known facts.'

'In treating malignancy, to attain a satisfactory recurrence-free rate necessitates the employment of high doses. Doses below this level must result in a high percentage of recurrences. It is there-

fore inevitable, if the therapeutic aim is to cure the maximum number of cases, that the normal skin must undergo some radiation change. If a dermatologist states that he gets no high-dose effects in treating malignancy, I can only say that his recurrence rate must be high.'

'In the treatment of benign skin conditions the employment of dosages which may cause permanent skin changes—with the attendant danger of late radiation-induced malignancy—is unjustifiable, no matter who administers the radiotherapy. The rationale of the use of radiation in the treatment of benign skin conditions has, as yet, not been satisfactorily elucidated. I wonder if Dr. Loewenthal would venture an opinion on whether the benefit derived from treating benign non-neoplastic skin lesions is due to the local radiobiological or the more general psychogenic effect of the therapy.'

Dr. Loewenthal (in reply)

The interest shown in this important subject and the impartial nature of the discussion are most gratifying. It is true that the tendency today is to use smaller fractionations of superficial therapy for inflammatory dermatoses, except in the 'Grenz' range, where individual doses of 100–300 r. are still used. Dr. Fix mentioned that the use of modern superficial therapy machines entails a very short F.S.D. With the beryllium window, however, rays generated at 14 kv. 25 ma. can be used with F.S.D. of 30 cm. and reach the skin at a rate of 20–30 r. per minute. With the whole-body irradiation generated at 50 kv. and without a filter it is true that $d_{\frac{1}{2}}$ in tissue is 2 mm., but I agree that *some* of the radiation must be highly penetrating; as it is highly heterogeneous we do not know what proportion this represents, but I may mention that, when calibrating my own machine, an appreciable amount of radiation (50 kv., no filter) traversed 3 metres of air and $4\frac{1}{2}$ inches of brick wall. Nevertheless, if only one side of the body is treated in this way and beneficial results are produced, no change is seen in the dermatosis on the other, or exit side.

Regarding Dr. Fix's mention of the psychogenic effects of therapy, I think this is true in a certain proportion of cases. Thus warts will respond to the suggestion of being exposed to a machine which is not switched on in the same degree as they may respond to other forms of suggestion treatment. Furthermore Twiston Davies* showed that in a series of eczema cases in whom symmetrical areas were treated with actual X-rays and make-believe exposures very little difference in results could be observed. This does not accord with general belief nor with the frequently observed phenomenon of improvement stopping abruptly where lead shields have been used near the periphery of treated areas.

* Brit. J. Derm. (1956): 68, 298.

MALE/FEMALE BIRTH RATIO OF EUROPEANS IN WEST AFRICA*

M. D. W. JEFFREYS, M.A. (OXON.), PH.D. (LOND.)

Witwatersrand University, Johannesburg

During my 30 years service in Nigeria the question of European vitality and fecundity was often discussed in the social circle, and I was gradually led to collect such data on the subject as I could. There appeared to be a divergence between the male/female birth ratio of Europeans living in Europe and that of Europeans residing in West Africa. The answer to this divergence I have endeavoured to find.

NORMAL EUROPEAN MALE/FEMALE BIRTH RATIO

Haslett¹ writes: 'It is a fact which still awaits explanation, that there was a slight but definite increase in the proportion of male children born in all the principal belligerent countries during the war (1914-18) except in Italy. Whereas in Germany during the 8 preceding years 1,055 boys had been born for every 1,000 girls, the wartime proportion rose to 1,068. In England the corresponding rise was from 1,039 to 1,048, and in France from 1,045 to 1,054.'

* This research was aided by a grant from the National Council of Social Research, for which assistance the author is deeply grateful.

There was also a perceptible rise in the Netherlands, the neutral country most affected by the war, from 1,051 to 1,059'. Thus the pre-war male/female ratio in these 4 European countries (males born per 1,000 females born) was 1,039, 1,045, 1,051 and 1,055; let us accept 1,047 as a norm.

NIGERIAN INVESTIGATION

I was, when in London, refused permission to consult the records of the West African Widows and Orphans Pension Scheme kept by the Crown Agents for the Colonies wherein is classified the sex of children born to colonial civil servants. There the data I required would have been obtained within a few hours. I have therefore had to collect the data for Nigeria slowly through the years, from friends who have supplied the names of their acquaintances and the sex of the children born to them. As the names came in, I entered them alphabetically to avoid duplication.

The European population of Nigeria was then about 16,000 and the figures thus collected show a total of 386 families with

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677 children born, of whom 391 were girls and 286 were boys, which numbers give the unusual ratio of 733 boys born to 1,000 girls born. In a sample of this magnitude the difference in the numbers of the two sexes is highly significant.

From my Nigerian figures the average size of these families is 1.75 children per family. This figure applies to fertile marriages only; if all European marriages were included the average size would be considerably smaller. This reproductive rate is insufficient to maintain the stock. However, as the wives in these families are in many cases still of child-bearing age, the 1.75 children per family is not the true final fertility rate.

Out of these families it was possible, in 294, to ascertain the sex of the first-born. In 115 families the first-born was a male and in 179 families a female. It is known that the viable first-born is more often female than male, yet the disproportion shown in the 294 families is out of all normal ratios.

These figures have been amassed, with one exception, from the whole of Nigeria, which is low lying, hot and humid, and the food tropical in variety and origin. The exception is the Jos plateau, where the altitude, 4,000 feet or so, makes the place cool and less humid. Here the temperate climate of Europe is approached, with European vegetables, milk, butter and fresh meat in abundance. The male/female birth ratio on the Jos plateau, shows a startling divergence from the rest of the figures.

Through the kind favour of Mrs. Fagg, wife of the Curator of the Museum at Jos in Nigeria, I have received a copy of the Register of European births kept by the Government Health Department there. According to this register, for the years 1920-55, 340 girls were born to 386 boys, or a male/female ratio of 1,135 boys to a 1,000 girls, which figures give an 8.6% excess of the normal European male/female ratio of 1,047/1,000, and opposite in 'sign' to the ratio 773/1,000 given by my own figures for the rest of Nigeria.

These Jos figures of 726 for total births added to those I have collected for the rest of Nigeria, namely 677, give 672 boys born to 731 girls, or a male/female ratio of 920 boys to a 1,000 girls, which is a deficit of 11% on the normal male/female ratio of 1,047/1,000. Some explanation for these differences is called for, and attention will be focused on climatic factors for a start.

EUROPEAN HEALTH AND FERTILITY IN THE TROPICS

There are abundant records that in past centuries Europeans exhibited extremely high mortality rates in tropical West Africa, which became known as the *White Man's Grave*. Many of the conditions responsible for this high mortality no longer obtain. It is, however, still accepted that a tropical environment does impair the health of Europeans.

Worthington² writes: 'It seems probable that a uniformly high temperature is a factor adverse to health, and occasional changes to a cooler climate, either at a hill station or in temperate latitudes, are desirable for Europeans working in the hotter parts of Africa.' Fleure³ in his review of Max Sorre's book remarks: 'The fair European between the tropics is liable to a phase of superactivity of the skin, followed by a lowering of the pulse, a general lassitude, craving for stimulants and so on; in many cases his birth rate diminishes dangerously.'

The Portuguese chronicler, Valentim Fernandes,⁴ records in 1506 that about 1493 King John of Portugal despatched to the West African island of San Tomé some 2,000 children under 8 years of age whom he had seized from the hands of Castilian Jews and had baptized into the Roman Catholic faith. Some 1,400 of these children perished within the first two decades of life, and Fernandes wrote: 'At this moment there survive—men and women—less than 600. The Governor has married them to each other, but very few of these women are fecund with white husbands; on the contrary there is a much greater fecundity between the white women and the Negroes and between the negroes and white men.'

To what extent does such an environment affect the metabolism of the European sexes? The tropical environment of West Africa does affect many European women, especially blondes, in that their menses occur more frequently or more copiously than in Europe. This phenomenon was reported by Jean Barbot,⁵ who was on the West African coasts in 1699. Thus he writes: 'It has been observed that Danish women cannot live long there

(at Fort Frederichsburg, Gold Coast), being commonly subject to a prodigious loss of blood, by a distemper peculiar to their sex; as lately happened to a general's wife, who had not been there a year.' This same phenomenon came to my notice during my years of service.

Now it would seem that such a change in the metabolism of the female would affect all her *ova* uniformly and as the human *ova* all carry the *x* chromosome only, there would ensue no differential selectivity which would account for the preponderance of female births that occur. With the male it would be far otherwise, because the sperms are of two types and a sufficient change in the metabolic environment might produce differences in the two types of sperm so that one type had a greater possibility of fertilizing the *ova* than had the other type, thus accounting for the preponderance of European female births in a tropical environment.

This conclusion, namely that the explanation of an excess of female births is traceable to a change in the male germ cells, is at variance with that given by Haslett,¹ who wrote: 'Provided that nature's method is retained, there is one hope, and one hope only, of controlling the sex of our offspring. It is that some physical condition of the woman makes fertilization with one kind of sperm more probable than fertilization with another kind.' As the *ova* are all uniformly *x*-carrying chromosomes it is most unlikely that Haslett's suggestion is even a probability. There is no reason to indicate that the uniformity of the *ova* can be so influenced that some *ova* will be more partial to fertilization by say the *x*-carrying sperms than the *y* ones. What is far more probable is that differentialia can be achieved among the two different types of sperms so that one type has a greater potential for fertilizing the *ova* than has the other type. It is now necessary to say something about the role of the sperms in fertilizing the *ova*.

THE ROLE OF THE SPERMS

Hogben⁶ wrote: 'The male of the human species has 23 equal pairs (*xx*) and one unequal pair (*xy*) of chromosomes in the unreduced nuclei. Thus two types of sperms are produced, *x*-bearing and *y*-bearing respectively, the one female-producing and the other male-producing. . . . In species having an *xy* pair in the male, measurements of the sperm heads show that the sperms are of different sizes.' Here then is an innate factor in the sperms which may, under certain adverse metabolic environments, lead to a selective differentiation in the male/female birth ratio.

Which variety of sperms carries the female determinant, the large or the smaller sperm? Mottram,⁷ writing of the fruit-fly *Drosophila* remarks: 'In the female there are two straight chromosomes and in the male one straight and one hooked. . . . Where there are two chromosomes connected with sex, as in the fruit-fly, we can call the large, normal-shaped one the *x* chromosome and the hooked one *y*. Females are *xx* and males are *xy*. . . . Man follows the *xy* plan. Of the sex chromosomes in man one is large and one small. If a fertilized *ovum* possesses two *xx* then that *ovum* will develop into a girl, if *xy* a boy will result. Unfertilized *ova* are all alike. They contain one *x* each. The spermatozoa are of two types produced in equal numbers—one with an *x* chromosome, one with a *y* chromosome. As there are approximately equal chances of *x* chromosome sperms meeting *x* chromosome *ova* and of *y* chromosome sperms meeting *x* chromosome *ova* there ought to be as many girls born as boys, and that is approximately true.'

This statement of the position over fertilization of the human *ova* is, as Mottram says, approximately true for Europeans in Europe, with about a 5% preference in favour of male births. These figures, as I have shown,⁸ are approximately correct for *Homo sapiens* wherever found, with this exception of the European in tropical West Africa, where a reversal of the male/female birth ratio occurs to the detriment of the male. Mottram continues: 'It is moreover a fact that the spermatozoa in man and in many mammals can be seen to be of two sizes in equal numbers: one larger, one smaller. It is almost certain that the large sperms carry the *x* chromosome and the smaller the *y* chromosome, so that if we could separate the two (by centrifugation or by making them run an obstacle race) we could make practically

certain of having a heifer, an ewe or a girl at will.' From the data I have collected it appears that the chances of having a girl are nearly 11% greater if the male parent lives in tropical West Africa, and that there is some factor operating against the *y* sperm.

Montague⁹ has drawn attention to defective nutrition as a possible factor in bringing about a change in the male/female birth ratio. He writes: 'Even though male-producing sperms are produced in the same numbers as female-producing sperms, between 120 and 150 males are conceived as compared with 100 females. Why this should be we do not know, but it is a fact. The ratio at birth for American Whites is 106 males to 100 females. (The ratios vary for different human groups, depending largely upon their socio-economic or nutritional status.) In India the sex ratio of boys is 98.7 to 100 girls. In other words, the poorer the nutritional conditions the greater the lethality of the males.' These Indian figures refer to the undernourished Hindu and not to the Europeans in India.

The average diet of the European in Nigeria is not one that could by any means be regarded as nutritionally poor—certainly not poor enough to account for the disparity in the male/female birth ratio. It therefore seems that some other factor must be responsible for this difference.

Mottram,⁷ discussing the reason for the normally greater number of boys born to the number of girls, remarks: 'It appears that more of the small spermatozoa succeed in fertilizing *ova* than the large. They get there first, possibly because of their smaller size and greater agility, or they penetrate the *ovum* more easily. Anyhow, the sex ratio is not 100 : 100 as it should be on a theory of complete chance selection, but it is close enough to show that chance is the main factor.'

The figures which I have given show that chance is not the only factor determining the male/female birth ratio for Europeans on the West coast of tropical Africa. There appears to be a lethal factor operating selectively against *y* sperms. It also appears that, whatever the lethal factor is, its effect on the *ova* would affect equally all *ova* and so would not lead to an 11% differentiation in the male/female birth ratio. Consequently it follows that something must be adversely affecting only the spermatozoa. One possible explanation of this difference in the male/female birth ratio is that less of the *y* sperms or more of the *x* sperms were being produced; but there is no evidence to suggest that this differentiation happens and so, accepting that under West African tropical conditions the European male continues to produce approximately equal numbers of both types of sperms, it is clear that whatever it is that may be affecting the spermatozoa, the *y*-carrying or smaller sperm is more adversely affected than the larger *x*-carrying sperm.

Mottram,⁷ recalling that about 105 boys are born to 100 girls remarks: 'This ratio is greater still in favour of maleness if stillbirths and abortions are taken into account.' The question arises what is the explanation for the normally higher incidence of male births if *x*-carrying and *y*-carrying sperms are produced in approximately equal numbers. The answer appears to be in the greater mobility of the *y*-carrying sperms. Thus Walker¹⁰ writes: 'The slightly greater vigour of the *y*-bearing spermatozoa and the higher ratio of male conceptions and births are therefore more than offset by the higher mortality of the male.'

The suggested explanation why in West Africa more *x* sperms than *y* sperms fertilize the *ova* is that something must be happening to retard the *y* sperm. The course of this retardation might be differences in the mucosa of the vagina and accessory canals or in the actual spermatozoa themselves. Differences in the mucosa of the vagina etc. may be ruled out because many of the European females concerned have remained in Europe and became pregnant there. Consequently the field of investigation is narrowed down to some defect in the spermatozoa which shows up more effectively in the *y*-carrying spermatozoa.

As the *y*-carrying sperm is smaller but more active than the *x*-carrying sperm it follows that if in any way either the mass, or the velocity, or both, of the sperms is reduced the reduction will affect the *y*-carrying sperm to a greater extent than the *x*-carrying one. If the motility is reduced, the reduction will have a greater retarding effect on the lighter and smaller *y*-carrying sperm than on the heavier and larger *x*-carrying sperm. Likewise, if the mass of the two varieties of sperms is reduced, the reduction will have a greater effect on the smaller sperm's motility than

on that of the larger one. The nett result of any such changes will be to ensure more of *x*-carrying sperms reaching the *ova* first and hence fertilizing them than of the *y*-carrying sperms doing so. The consequences will be a change in the male/female birth ratio at the expense of the male and in favour of the female. In other words more girls and less boys will be born.

CONCLUSION

During the years covered by my investigations in Nigeria there was one constant factor, namely the taking of the daily prophylactic dose of 5 grains of quinine. Quinine in pessaries being spermicidal *a prima facie* case may be made out for bringing quinine *per os* under suspicion as the cause for upsetting the normal male/female birth ratio. Whatever the factor is, whether it is the general tropical environment, or the prophylactic dose of quinine, or a combination of both (for one has in mind the figures for Jos), or some other as yet undetermined factor, there is created within the metabolism of the European male in West Africa (excluding the Jos area) a selection factor that adversely affects the *y*-carrying sperm. It is not known for certain what this adverse factor is, but light would be thrown on the problem by ascertaining the male/female birth ratio for unions between West African Negroes and European males. The only data I have is that of 8 such unions there were 10 girls and 7 boys.

This ratio, 700 boys to 1,000 girls, is based on insufficient data to be statistically significant yet when compared with my West African ratio of 733 European boys to 1,000 European girls it conforms with the pattern that would be expected if the *y*-carrying sperm in the European male is adversely affected because the normal Negro male/female birth ratio I have found to be 1,036 boys to 1,000 girls.⁸ I trust that others will continue this investigation and supply more conclusive evidence and more irreproachable data.

SUMMARY

The normal male/female birth ratio for *Homo sapiens* as a genus ranges from 1,040-1,060 boys to 1,000 girls. Two sets of figures are given for this ratio among the European population of Nigeria which by no means conform with the pattern for the genus. One set of figures for the healthy highlands of the Jos plateau shows 1,135 boys to 1,000 girls. The other figures, collected from hot humid, tropical Nigeria, give 733 boys to 1,000 girls.

The effect of climate upon European health in the tropics is examined as well as the roles of the *x*-carrying sperm and of the *y*-carrying sperm with a view to elucidating these changes in the male/female birth ratio. The conclusion reached is that any adverse factor in the system of the male that affected his metabolism and hence the vitality of the sperms, would have a greater adverse effect upon the *y*-carrying sperm than on the *x*-carrying sperm and so would reduce the chances of the *y*-carrying sperms fertilizing the *ova*. This change in the chances would lead to a decrease in the number of males born. At the moment, suspicion rests on the prophylactic daily dose of 5 grains of quinine as being the adverse factor.

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ORTHOPAEDIC CLINICAL MEETING

A clinical meeting was held by the Southern Transvaal Sub-group of the South African Orthopaedic Association on 25 October 1957 at the Transvaal Memorial Hospital for Children, Johannesburg.

Mr. J. J. Craig demonstrated 2 conditions:

1. *Developmental Coxa Vara*. Two cases recently treated at this hospital were shown.

(a) The first of these was a 10-year-old boy, who at first was diagnosed and treated as a case of bilateral congenital subluxation of the hip in Italy when he was 1 year old. When he commenced weight-bearing, however, it became apparent that he was a case of developmental coxa vara. He presented at this hospital for treatment at the age of 6 years but, owing to the resistance of his parents, nothing was done until he was 10 years of age, in spite of the fact that he had considerable restriction of movement at the hips, and was limping.

(b) The second case was a 5-year-old boy seen for the first time at this hospital in May 1957, with a history of having limped since he commenced walking at the age of 18 months. A barium meal performed for investigation of diarrhoea at the age of 4 months, revealed radiographically normal hip-joints.

In an article published in 1948, Le Mesurier had pointed out that such cases could be treated either by the introduction of a Smith-Petersen pin or tibial bone graft along the femoral neck or by a subtrochanteric abduction osteotomy, according to the degree of coxa vara.

Both cases were treated by a bilateral subtrochanteric wedge osteotomy to correct the coxa vara deformity. The older boy now walked without a limp and had a normal range of movement at the hip joints.

In the younger boy, the range of movement at the hips was within normal limits, but he still had an awkward gait, probably because he had only been out of plaster for 1 month.

Mr. J. Edelstein: The defect is said not to be at the epiphysis, but in this condition he has yet to see a true epiphyseal line in the neck. In both cases demonstrated, the defect disappeared within a few months, bearing out the value of the treatment of these cases by osteotomy.

Mr. C. T. Moller: In both cases, if the defect is not the epiphyseal line, there is no epiphyseal line present, in spite of the youth of the two patients concerned. He remarked that in his experience the opportunity of demonstrating apparent radiological normality in infancy, as in the second case, was unique.

Mr. G. F. Dommissse asked whether the lesion was not part of a generalized hip dysplasia.

2. *Congenital Anomaly of Elbow*. This child, now 14 years of age was first seen at the Addington Hospital, Durban, by Mr. A. Lewer Allen in April 1943, when she was 6 weeks old. She was found to have a congenital absence of the proximal end of the left ulna associated with a posterior dislocation of the head of the radius. The condition was treated by splintage until December 1947, when an open reduction of the dislocated elbow was performed. The head of the radius was brought round to articulate with the rudimentary capitellum after isolation of the ulnar nerve. She first reported at this hospital in September 1948, complaining of a deformity of the left elbow. Since then a waiting policy has been adopted because it was felt that she was too young for further surgery.

When she was examined in October 1957, the following observations were made on the left elbow:

(a) She had a 90° flexion deformity, and from this point was capable of a further 35° for flexion.

(b) The forearm was held in a position of full supination and she is able to pronate approximately 20° from this point.

(c) There is ulnar deviation of the hand but the function of the hand is good.

(d) The head of the radius is dislocated posteriorly and projects approximately 2 inches behind the distal end of the humerus.

Mr. Craig asked the meeting for suggestions on how the function and appearance of the elbow could possibly be improved.

Mr. W. T. Ross suggested that the elbow should be left strictly alone, because it is his experience that osteotomies in congenital abnormalities fail to unite.

Mr. H. Klein was of the opinion that as the function of the

elbow is satisfactory, it should be left alone. One could not guarantee that the elbow would be stable after excision of that portion of the radius posterior to the humerus.

Mr. Moller expressed the view that as the patient is a girl, something should be done in the cosmetic line. He said that, after explaining to the parents the risks involved, one should do something, if only for cosmetic reasons, and if sufficient radius was removed, one might even gain some pronation.

Mr. H. Klein showed a case of *Neurofibromatosis*, a boy aged 8 years with scoliosis. Other members of the family were affected by the same condition: the mother demonstrated pigmentation and had undergone surgery for sundry nodules; the grandmother had pigmentation but no disability; and a younger brother had café-au-lait spots but no other abnormality. This patient had been referred to hospital by the school authorities for scoliosis which, according to the mother, had been slowly progressing. Other than café-au-lait spots, he had no other apparent abnormality. X-ray examination revealed that the thoracic curve extended from D7 to D11 and was most marked at D8 and 9. The angle of the curve was 51° supine and 63° erect. The compensatory curves were mobile and the shoulders well above the pelvis.

Mr. D. J. Retief: This is a typical triple-type curve which in view of the family history will definitely progress. This being so, the spine should be fused forthwith.

Mr. I. S. de Wet: In the 4-5 cases he had seen, the primary curve had been in the lumbo-dorsal region and had been associated with an increased kyphosis, not in the mid- or lower dorsal region as in this case. In reply to a question by Mr. Edelstein, who made the point that tissue confirming the diagnosis of neurofibromatosis had never been found at operation in these cases, Mr. de Wet said that it had been postulated that the scoliosis was due to defective osteogenesis combined with an abnormal innervation of the rotator muscles of the spine.

Dr. Badenhorst demonstrated a bone mill which he had devised to deliver bone in two forms—either as 'match sticks' measuring approximately 1×0.1 inch, and admirably suited for spinal fusions, or as chips measuring 0.1×0.1 inch. The great advantage of the mill is that large amounts of bone can be reduced to usable size in a very short time and with a minimum of effort.

Mr. J. Edelstein showed cases of 2 conditions, viz. (1) *Cyst of Neck of Femur* and (2) *Cyst of Tibia*.

Mr. Edelstein stated that the two cases demonstrated the difficulties of pre-operative diagnosis of the nature of bone cysts. The first case, a radiologically typical simple bone cyst in the upper end of the femur had proved to be a case of monostotic fibrous dysplasia. Five cases, in his experience, with identical X-ray pictures had proved to be true simple cysts.

The second case, a cyst in the shaft of the tibia, had been diagnosed pre-operatively as a non-osteogenic fibroma, the reasons for this diagnosis being the presence of swelling and pain, and the fact that the cyst was eccentric and trabeculated. At operation the lesion proved to be a simple bone cyst.

Both cases were treated by thorough curettage and were packed with bone chips.

Mr. S. Sacks raised the point that nobody is really justified in making a dogmatic X-ray diagnosis, because even pathologists of note differ on the nature of the biopsy material in these cases.

Mr. C. T. Moller, under the title *Some late problems in fracture treatment: What would you do?* Presented 7 fracture cases, each posing a particular problem in treatment:

(a) A child aged 10 months with bilateral club foot. The feet had been manipulated under general anaesthesia and plaster applied on several occasions from the age of 2 months. After removal of the plaster 1 month before the meeting, an unusual appearance of the left leg was noticed; there was a valgus deformity of the left ankle. X-ray examination revealed that this was due to lateral displacement of the lower tibial epiphysis.

(b) A child with a supracondylar fracture of the elbow. The fracture had been manipulated and put up in extreme extension. Some 3-4 weeks later it was seen at this hospital, when it was found that the distal humeral fragment was displaced posteriorly. The child could flex the elbow only a few degrees. By taking up

the maximum possible flexion by successively shortening the sling, he is now able to flex to 60°.

(c) A boy who had sustained a supracondylar fracture of the femur and a ruptured diaphragm and bowel. The fracture had been reduced at the time of the abdominal operation but the fragments had re-displaced in plaster. Mr. Moller had been unable to deal with the fracture for 3 weeks thereafter, owing to the poor general condition of the patient. An open reduction was then performed and reduction was maintained by the introduction of two staples, one of which straddled the epiphyseal plate. Mr. Moller asked the meeting whether the staples should be removed at a later date owing to the possibility of their interfering with growth at the epiphysis.

(d) A child who had sustained a fracture of the first phalanx when his index finger had been crushed in a door. The fracture was manipulated 3 days after the accident, a good position being obtained. The plaster was removed only 2 weeks after reduction, because of the probability of stiffness of the finger if it were to be immobilized longer. Three weeks later there was still no movement in the finger, and so a 'lively splint' was fitted. Three weeks later it was found that the displacement had recurred. The present range of movement at the proximal interphalangeal joint is full extension, and 90° of flexion, but there is 80° of posterior angulation at the fracture site.

(e) X-ray of boy who had sustained fracture separation of the upper humeral epiphysis with a considerable degree of displacement. He had received no treatment because he was taken on holiday by his family but, in spite of this, he had regained full function at the shoulder.

(f) A child was admitted to another hospital with osteomyelitis of the femur. There, he shared a bed with another child, who sat on his leg and produced a fracture of the femur. Shortly after, the child contracted an infectious disease and was removed to the Isolation Hospital. He returned with 80° of angulation at the fracture site and was treated by manipulation under general anaesthesia, the intention being to straighten out the limb at the fracture site. The outcome of this manipulation, however, was another fracture at a higher level, so that the child now had two fractures, each of them angulated to 80°. The limb was immobilized in plaster until firm union had been obtained. With

the passage of a few years the leg is now straight and equal in length to the other.

(g) X-rays of a 12-year-old boy. At the age of 14 his father had experienced disability in both hips, the condition being diagnosed as developmental coxa vara and the hips were treated by immobilization in plaster. The outcome has been that the father now has completely stiff hips. His son now presents with a disability of both hips and Mr. Moller suggests that he is likely to suffer the same fate as his father, and asks the meeting for its views on diagnosis.

Mr. Sacks suggested that nature had produced good results in some of the cases and should be given a chance in the remainder.

Mr. C. Morris, referring to case (c), stated that one staple across the epiphyseal plate could not influence bone growth.

Mr. Edelstein said that the staples would have done their job after 3 weeks and should then both be removed in any event.

Mr. Dommissie said that the staple straddling the epiphysis should be removed and inserted in a similar position on the other side to slow up growth there, as the epiphyseal plate had been damaged by the fracture on the side at present straddled by the staple.

Mr. Ross, referring to case (d), mentioned that he had found that the injection of hyalase into traumatized fingers was of value and, for the rest, nature could be relied upon to deal with most fractures in this situation.

Mr. M. Lunz, under the title *Rubber Legs*, demonstrated a child who was a typical case of osteogenesis imperfecta of the third or adolescent type. At the time of admission to hospital from the country, both lower limbs were encased in plaster. On these being removed it was found that there was extreme mobility at the mid-shaft of both tibiae. It was assumed that the child had ununited fractures of both tibiae and fibulae, but X-ray examination revealed no fractures in these bones. They were, however, attenuated in their middle thirds to an extent where the tibiae were no thicker than a pencil and the fibulae no thicker than a Steinman pin. The movement elicited in the bones was in actual fact, due to bending of the attenuated bones.

Mr. C. M. Sarkin remarked on the hirsutism of this patient for a child of his age, and suggested that he should be investigated from the angle of an endocrine deficiency.

OFFICIAL ANNOUNCEMENT : AMPTELIKE AANKONDIGING

MINES BENEFIT SOCIETY MEMBERS AS HOSPITAL PATIENTS

On 12 July 1957, the Transvaal Augmented Executive Committee of the Association interviewed the Medical Director and the Secretary of the Hospital Services Department of the Transvaal to discuss the treatment of Mines Benefit Society patients as hospital patients in Transvaal public hospitals.

The Committee informed the Medical Director that in certain Transvaal public hospitals, members of the Mines Benefit Society, after having been duly recommended as such, were being admitted for treatment as hospital patients, and that the Association considered that, as these persons were insured against illness, the question of their not being able to afford medical treatment should not arise, and that they should therefore not be capable of being recommended as hospital patients.

NEW PREPARATIONS AND APPLIANCES: NUWE PREPARATE EN TOESTELLE

ATABAKKO

The distributors for this remedy against chronic tobacco poisoning are Luisin-Apotheke (Pty.) Ltd., P.O. Box 75, Windhoek South West Africa, from whom the following information is obtained. It is manufactured by Boxberger, Bad Kissingen, Germany.

Atabakko is presented with the object of accelerating nicotine eliminations by the intestine and kidneys. It also assists in abstinence from smoking by decreasing the craving for tobacco and eliminating most of the symptoms of deprivation.

The patient is supplied with (1) tablets and (2)—(5) four different

dragées of distinctive colours. These have the following composition:

Tablets (No. 1): Fol. Menthae pip. 0.01 g., acid tannic. 0.005 g., acid ascorbic. 0.015 g., corrigentia q.s.

Dragées (No. 2, brown). Natr. glycerophos. 0.05 g., acid tannic 0.025 g., kal. jodatum 0.005 g., aneurin. hydrochlor. 0.0025 g., faex concentrat. 0.12 g.

Dragées (No. 3, pink). Caffein pur. 0.025 g., theobromin. pur. 0.05 g., chinidin. pur. 0.02 g., hexamin. ann. methyl. citr. 0.10 g.

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Dragées (No. 4, green). Methionin 0.15 g., cystein 0.05 g., cobalt. chlorat. 0.0025 g., chlorophyllin. 0.025 g.

Dragées (No. 5, white). Aloe 0.02 g., extr. sennae 0.06 g., extr. valerian 0.10 g., natr. choleinic 0.01 g.

The manufacturers suggest a daily schedule by which at 2-hourly intervals four No. 2, four No. 3, two or three No. 4 and one-three No. 5 dragées are taken during the day. The tablets are to be sucked in the mouth at any time, especially when abstinence symptoms appear.

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PASSING EVENTS : IN DIE VERBYGAAN

The First Congress of the South African Association of Surgeons will be held at the University of Cape Town Medical School on 28, 29 and 30 April 1958. The organization of this Congress will be undertaken by the Department of Surgery of the University of Cape Town. It is hoped that a similar Congress will be held every alternate year at a different venue.

The Congress is not exclusively for members of the South African Association of Surgeons but for all doctors interested in surgery and the organizers are particularly anxious that surgeons from all over the Union, South West Africa and the Rhodesias should attend.

Anyone interested in attending or reading a paper at the Congress is requested to write to Dr. D. J. du Plessis, Department of Surgery, Medical School, Observatory, Cape Town.

* * *

The protection of workers against ionizing radiation in the industrial use of X-rays or radio-active substances. A meeting of an ILO committee of experts met at Geneva to consider this subject from 25 November to 11 December 1957. They dealt chiefly with the extraction and treatment of uranium minerals, and the use of X-rays and radio-active substances, including luminising and fluoroscopy. Their principal task was to establish practical international standards and to revise the ILO 'Model Code for Safety Regulations for Industrial Establishments'. The committee included experts from the UK, USA, USSR, France and Western Germany.

* * *

The First International Congress of Endocrinology will take place in Copenhagen, Denmark, during 18-23 July 1960. The programme will consist of a series of symposia on topics of contemporary interest in endocrinology, plus sessions of short papers contributed by investigators from the various countries of the world. The organizers invite suggestions for the symposia, both as to topics and as to speakers. They would like to have the shorter papers initially screened by the local societies and the titles and abstracts of those considered most suitable forwarded to Dr. Gregory Pincus, Chairman of the Subcommittee on Programme, The Worcester Foundation for Experimental Biology, Shrewsbury, Massachusetts, USA.

The VI International Congress on Tropical Medicine and Malaria will be held in Lisbon, Portugal, on 5-13 September 1958 (the previous Congress was held in Istanbul in 1953). It will be under the sponsorship of the Portuguese Government, the Instituto de Medicina Tropical will be the executive body, and a National Organizing Committee has been designated by the Portuguese Government. The official languages will be Portuguese, French, English and Spanish.

The Congress is divided into two divisions, viz.: (A) Tropical Medicine, (B) Malaria. Division A is divided into 7 sections, as follows: (1) Helminthic Infections, (2) Protozoal Infections, (3) Bacterial and Mycotic Infections, (4) Virus and Rickettsial Infections, (5) Tropical Physiology, (6) Tropical Hygiene and Sanitation, (7) General. Division B consists of 4 sections, viz.: (1) Parasitology, (2) Clinical, (3) Epidemiology and Control, (4) Malaria Eradication.

The Congress will include plenary sessions, and also sectional meetings. The programme of papers has been arranged, but additional communications will be received. The latter are not to exceed 1,500 words and must be submitted in duplicate together with an abstract of not more than 300 words not later than 4 months before the Congress. Authors desiring to show motion pictures of 8 or 16 mm. with or without sound are requested to inform the Secretary as soon as possible.

Members of Congress will comprise Government representatives from major organizations concerned with tropical medicine or malaria, other representatives of scientific and philanthropic organizations interested in these subjects, and private persons professionally interested in these subjects. Other classes of members are contributors towards the finances of the Congress, and associate members, viz.: members' relatives, other persons interested in tropical medicine or malaria, and students. The registration fee will be \$15.00 for full members, and \$10.00 for associate members. Application forms and cheques to be sent to the Secretary of Congress, Prof. Manuel R. Pinto, Instituto de Medicina Tropical, Lisbon; cables, Medicotropical, Lisbon. Members can obtain visa facilities through Portuguese embassies, legations and consulates. The Laval Prize will be awarded for the best paper on Malaria. A historical exhibition, social events, tours and excursions will be arranged. Direct transport from South Africa can be arranged through the Pan American World Airways.

REVIEWS OF BOOKS : BOEKRESENSIES

EMERGENCIES IN GENERAL PRACTICE

Emergencies in General Practice. Special commissioned articles from the British Medical Journal. Pp. 470. 25s. net. London: British Medical Association.

Contents: Section 1. Haemorrhage and Thrombosis. Shock. Severe Haemoptysis. Haematemesis and Melaena. The Bleeder. Apoplexy. Pulmonary Embolism. Sudden Major Arterial Occlusion. Coronary Thrombosis. Section 2. Cardio-

Respiratory Crises. Cardiac Asthma. Dangerous Bronchitis. Acute Pneumonia. Severe Asthma. Spontaneous Pneumothorax. Acute Respiratory Obstruction. Respiratory Paralysis. Section 3. Anaesthesia and Hazards of Therapy. Anaesthetic Emergencies. Injection Accidents. Serum and Anaphylactic Reactions. Reactions to Sulphonamides and Antibiotics. Section 4. Acute Abdominal Cases. The Acute Abdomen. Acute Abdomen in Children. Acute Retention of Urine. Section 5. Obstetrics. Threatened Abortion. Ante-partum Haemorrhage. Eclampsia. Obstructed Labour. Post-partum Maternal Collapse. Emergencies in the Puerperium. Birth Trauma. Haemorrhage in the Newborn. Premature Babies. Section 6. Fits and Coma. "Fits". Sudden Giddiness. Syncope. Diagnosis

of Coma. Diabetic and Insulin Coma. Coma in Hypopituitarism. Crises in Myxoedema. Acute Hepatic Failure. Section 7. *Electrocution, Burns, and Gassing*. Electrical Accidents. Burns. Gassing in the Home. Section 8. *Poisoning*. Corrosive Poisoning. Barbiturate and Aspirin Poisoning. Poisons Children Swallow. Agricultural Pesticides. Acute Alcoholic Poisoning. Food Poisoning. Section 9. *Acute Psychiatric States*. Attempted suicide. Acute Psychosis. Acute Anxiety and Hysteria. Acute Delirious States. Senile Confusion. Section 10. *Surgical and Minor Surgery*. Ocular Emergencies. Severe Earache. Dentistry at Sea. Common Mishaps. Index.

When a specially commissioned series of articles on emergencies is collected into one volume, one expects a good book; when the articles are commissioned for the British Medical Journal and are written by the men who are contributors to this journal, there can be no question as to its value. They appeared in that Journal from January 1955 to June 1956 and have all been fully revised before being published in book form this year. The British Medical Association has performed a service to the profession in general and to general practitioners in particular when it produced the three 'Refresher Course' volumes, and this book can be considered to be a direct successor of those three works.

It will appeal to all general practitioners and to senior students, and resident medical officers will find it to be invaluable in their work and study.

A glance at the contents list shows the comprehensive cover that has been given to the subject, and the grouping of the articles is satisfactory. A full index completes the volume.

In addition to the usual sources of supply, this book may be ordered through the office of the Medical Association of South Africa, P.O. Box 643, Cape Town, at 26s. post free, cash with order.

A.H.T.

SOVIET MEDICINE

Abstracts of Soviet Medicine. Part A—Basic Medical Sciences. Vol. I, 1957, No. 1. Chief Editor: Prof. M. W. Woerdeman, M.D. Pp. 96. Published quarterly by the Excerpta Medica Foundation, 111 Kalverstraat, Amsterdam, The Netherlands.

Contents: I. Anatomy. Anthropology, Embryology and Histology. II. Physiology. Biochemistry and Pharmacology. III. Endocrinology. IV. Medical Microbiology, Immunology and Serology. V. General Pathology and Pathological Anatomy.

These abstracts fill a considerable gap in world medical literature and will therefore be welcomed by doctors in all branches of medicine. The Russian literature is not widely known though its importance is realized. The abstracts will be published quarterly in two parts. Part A will cover the basic medical sciences, and Part B, clinical medicine. The abstracts for the first issue of Part A have been selected and prepared by the Foundation's Russian editorial contributors, specially appointed by the Academy of Medical Sciences of the U.S.S.R. and have been translated and edited by the Foundation's editorial board in Amsterdam.

H.Z.

TUMOURS OF THE KIDNEY

Tumors of the Kidney, Renal Pelvis and Ureter. By Balduin Lucké and Hans G. Schlumberger. Pp. 208. 187 illustrations and diagrams. Washington: Armed Forces Institute of Pathology. 1957.

Contents: Introduction. Tumors of the Kidney. Tumors of Mature Renal Parenchyma. Tumors Arising from Mesenchymal Derivatives. Tumors of Connective Tissue. Tumors of Adipose Tissue. Tumors of Muscle. Tumors of Vascular Tissue. Tumors of Mixed Mesenchymal Origin. Secondary Tumors of the Kidney. Metaplasia of Transitional Epithelium. Epithelial Tumors of the Renal Pelvis. Non-epithelial Tumors of the Renal Pelvis. Epithelial Tumors of the Ureter. Non-epithelial Tumors of the Ureter. Secondary Tumors of the Ureter.

This monograph is a part of the well-known series of Atlases of tumour pathology, published by the Armed Forces Institute of Pathology in Washington, and therefore needs no introduction. The subject matter, the production and numerous illustrations are well up to the standard of the previous sections in this series.

The various tumours are considered under separate headings and even the rarest are included. There is, for instance, a detailed account of adenocarcinoma of the renal pelvis, based on the three case reports from the world literature. The text includes sections on the clinical and radiological features, on treatment and prognosis as well as the pathology. The bibliographies are extensive and include references from both sides of the Atlantic.

The chapters on adenocarcinoma of the kidney, nephroblastoma and epithelial tumours of the renal pelvis, are particularly good and the illustrations of the specimens, the radiographic features and histological variations, are excellent. The section on secondary tumours of the kidney includes a well-illustrated account of the renal involvement in lymphosarcoma, leukaemia and Hodgkins Disease.

The authors have succeeded in producing a detailed, well-documented and authoritative account of the pathology of renal and ureteric tumours, which will probably become a standard reference work on this subject. It will appeal mainly to pathologists, but could be read with profit by urologists and by post-graduates engaged in study for their higher surgical examination.

D.R.B.

AIDS TO PAEDIATRICS

Aids to the Diagnosis and Treatment of Diseases of Children. Tenth Edition. By F. M. B. Allen, M.D., F.R.C.P. (Lond) Pp. 302. 10s. 6d. London: Baillière, Tindall and Cox Ltd. 1957.

Contents: The Newborn Infant. Infant Feeding. The Premature (Immature) Infant. Vitamins and Vitamin Deficiency Diseases. Diseases of the Alimentary System. Diseases of the Respiratory Tract. The Infectious Fevers. Tuberculosis in Childhood. Rheumatic Disorders. Diseases of the Circulatory System. Diseases of the Genito-Urinary Tract. Diseases of the Endocrine System and of Metabolism. Diseases of the Nervous System. Diseases of the Muscles. Diseases of the Blood. Diseases of the Skin. Syphilis in Childhood. Appendix I: Diet for Sick Children. Appendix II: Some Useful Tables. Appendix III: Chemotherapy. Appendix IV: Prescriptions. Index.

This well known little book has now reached its 10th edition and is well worth the price charged. For those who are not concerned with the details but wish to have a readable, brief, and reasonably up-to-date account of modern paediatrics, this is the book.

Though small, it is remarkably informative. At the same time the contents are comprehensive but condensed, not into tables and lists, but into cursive form. The print is easily read. The index is good and the appendices, particularly that detailing a number of diets, would grace a much larger and more expensive production.

There are no photographs or X-ray reproductions, graphs, etc. here. The information is, however, accurate and has obviously been brought as closely as can be done in a text-book into line with very modern opinion.

For medical students and, as a portable reference book for the general practitioner in a country area, this would be a good investment.

F.J.F.

HENRY'S EXTENSILE EXPOSURE

Extensile Exposure. Second Edition. By Arnold K. Henry, M.B., Dublin; M.Ch.(Hon.), Trinity College, Dublin, and Cairo; F.R.C.S.I.; Chevalier de la Légion d'Honneur. Pp. xii + 320. 298 Illustrations. 45s. net + 1s. 5d. Postage Abroad. Edinburgh and London: E. & S. Livingstone Ltd. 1957.

Contents: Introduction. Section I. *The Upper Limb and Neck.* Posterior Humeral Exposure extensile to all Main Brachial Trunks. Anterior Humeral Exposure—Extensile to Shoulder Joint and to Elbow Joint. Extensile to Axilla, Back of Shoulder, and Neck. Sternomastoid Eversion giving an Exposure. Extensile to the Front and Side of Neck. Extensile to the Vertebral Artery. Extensile to Thorax from the Root of Neck. Extensile to Posterior Cervical Rami. The Distal Part of Humerus and Front of Forearm. The Back of the Forearm. Two Linked Approaches in the Hand. Section II. *Access at the Second Left Costal Arch.* Its Posterior Segment, giving access to the Left Subclavian Artery (First Stage). Its Anterior Segment, giving access to Pulmonary Emboli. Upper Thoracic Ganglia, Sympathetic and Spinal. Section III. *The Hypogastric Route.* The Space of Retzius, giving access to Visceral Pelvic Vessels. Hip-joint Nerves. Section IV. *The Lower Limb.* Subgluteal Exposure extensile to the Back of Thigh. Anterior Exposure of the Femur extensile to Hip and Knee. Popliteal Exposures (Inner and Outer) with their Extensions. Femoropopliteal Trunks. Deep Femoral Vessels. A Combination of these two Exposures. The Back of Thigh and the Leg. Posterior Exposures in the Leg. Extensile to the Sole of Foot. Transition from back to front by way of the Anterior Tibial Arch. Extension of the Anterior Leg Exposure to the Dorsum of Foot. The fibula and the Anterior Tibial Arch. Plantar Exposure. Index.

With the appearance of this second edition of 'Extensile Exposure' Professor Henry has consolidated his position as a writer of outstanding ability and wide culture. The numerous quotations in the text attest to a familiarity with first-class literature. This back-

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ground, together with the author's own work should be an object-
lesson to all contributors to medical literature.

There has been considerable extension of the scope of this work
since its first appearance twelve years ago so that 'applied to Limb
Surgery' has been omitted from the title of this edition. There are
two new sections. One gives an account of the access gained by
resection of the second Costal Arch to the Stellate ganglion and
the first part of the Subclavian artery behind and to the Pulmonary
trunk and the upper Thoracic Sympathetic and Spinal ganglia
and the appropriate nerve roots in front. There is an excellent
discussion on the use of this approach in the removal of large
Pulmonary Emboli. The other new section describes the application
of the lower midline abdominal incision to the operations of
Prostatectomy and complete denervation of the hip joint. In
resection of the Prostate he suggests a method of preliminary
ligation of the blood-vessels at their source to limit loss of blood
as is routinely performed in Thyroid resection.

In the Chapter devoted to the upper limb there has been added
a description of the access gained by detachment of the sterno-
mastoid muscle from the mastoid process with eversion of the
muscle, a method of exposure of the vertebral artery in its first and
second parts and of the first, second and third cervical posterior
rami in the treatment of spasmodic torticollis. In the section on
the lower limb there is a new description of exposure of the femoro-
popliteal and deep popliteal trunks and a clear description of the
seldom-performed operation of talectomy by an anterior approach
described by Willis Campbell.

The book is up to the high standard one associates with the
publishers, Messrs. E. and S. Livingstone. It is profusely illustrated
by excellent line drawings, which are a credit to the artist Miss Zita
Stead who is responsible for most of them.

Once again Professor Henry has demonstrated his literary
talents in producing a book which will be read with as great an
interest and pleasure as was the first edition. It is now firmly
established as a 'must' for all General and Orthopaedic surgeons.
I.J.

AIDS TO PATHOLOGY

Aids to Pathology. Eleventh Edition. By John O. Oliver. Pp.
8 + 447. With illustrations. London: Baillière, Tindall & Cox
Ltd. 1957.

Contents: I. Introduction—The Cellular Units of the Body. II. Infiltrations
and Degenerations. III. Pigmentation. IV. Atrophy and Hypertrophy. V. In-
fection. VI. Inflammation. VII. The Healing of Wounds, Repair. VIII. Im-
munity. IX. Necrosis and Gangrene. X. Disturbances of Circulation. XI. The
Cardio-Vascular System. XII. Diseases of the Arteries and Veins. XIII. The
Granulomata. XIV. Syphilis. XV. Haemopoietic System. XVI. Diseases of
the Lungs. XVII. Diseases of the Kidneys. XVIII. Diseases of the Liver. XIX.
Diseases of the Gall Bladder and Bile Ducts. XX. Diseases of the Pancreas.
XXI. Diseases of the Reticulo-Endothelial System including Spleen and Lymph
Nodes. XXII. Diseases of the Endocrine System. XXIII. Diseases of Bone.
XXIV. Diseases of the Joints. XXV. Deficiency Diseases (Avitaminoses). XXVI.
Animal Parasites. XXVII. Tumours (Neoplasms). XXVIII. Carcinogenesis.
XXIX. Diseases of the Breast. XXX. Diseases of the Nervous System. Index.

No major changes have been made in this eleventh edition of
this member of the 'Aids' family, as both the ninth and tenth
editions were changed to conform to recent advances in know-
ledge.

A new chapter on diseases of the breast has been added and
the separate chapters on wound shock and on diabetes have
been omitted. The descriptions of leprosy and actinomycosis
have been re-written in part, and the sections on aplastic anaemia
and on tumours of the lung have been amplified.

It is a good little book which has stood the test of fifty years
of publication and will no doubt be of value to students for many
years to come.

A.H.T.

SURGICAL ANATOMY

Treves' Surgical Applied Anatomy. Thirteenth Edition. Revised
by Lambert Charles Rogers, M.D., M.Sc., F.R.C.S., F.R.C.S.E.,
F.R.A.C.S., F.A.C.S. Pp. x + 591. 202 Figures. 30s. net.
London: Cassell and Company Limited. 1957.

Contents: Part I. The Head and Neck. I. The Scalp. II. The Bony Vault of the
Cranium. III. The Cranial Contents. IV. The Orbit and Eye. V. The Ear. VI. The
Nose and Nasal Cavities. VII. The Face. VIII. The Mouth, Tongue, Palate, and
Pharynx. IX. The Neck. Part II. The Thorax. X. The Chest and its Viscera.

Part III. The Upper Extremity. XI. The Region of the Shoulder. XII. The Arm.
XIII. The Region of the Elbow. XIV. The Forearm. XV. The Wrist and Hand.
XVI. The Nerve Supply of the Upper Extremity. Part IV. The Abdomen and the
Pelvis. XVII. The Abdomen. XVIII. The Peritoneum and Alimentary Tract.
XIX. The Other Abdominal Viscera. XX. The Pelvis and Pelvic Viscera. XXI. The
Perineum. Part V. The Lower Extremity. XXII. The Region of the Hip.
XXIII. The Thigh. XXIV. The Region of the Knee. XXV. The Leg. XXVI. The
Ankle and the Foot. Part VI. The Spine and Spinal Cord. XXVII. The Spine.
XXVIII. The Spinal Cord. Index.

This is the oldest textbook of surgical anatomy in English which
remains in current use. It was written originally by Fredrick Treves
and published in 1883. Successive editors were Sir Arthur Keith
and C. C. Choyce. The present edition is edited by Lambert C.
Rogers. Each of these distinguished editors has left his mark on
the book.

It is intended for students preparing for their final examination
in surgery and serves the purpose well, providing an abundance of
information on the practical application to which a knowledge of
anatomy may be put, rather than a detailed revision of mere anatomi-
cal features. The present day student may find it disconcerting
to encounter a nomenclature with which he is unfamiliar and the
use of the international system would be an improvement. The
information given is in accordance with current surgical practice
but some statements are made which will be disputed. Few
surgeons will agree that there is no connection between the axillary
lymph glands and the supraclavicular glands and that metastases
from carcinoma of the breast to the supraclavicular glands only
occur via the mediastinal glands.

Perhaps the greatest asset of the book is that it is very easy to
read.

M.H.deV.

HISTORY OF HAEMATOLOGY

Some Milestones in the History of Hematology. By Camille
Dreyfus, M.D. Pp. vi + 87. Illustrations. \$4.50. New York
and London: Grune & Stratton, Inc. 1957.

Contents: Foreword by Sir Lionel Whitby. Introduction. I. A Glance at the
History of the Blood. II. Chronic Hemolytic Jaundice. III. Notes on the Early
History of Leukemia. IV. A Historical Survey of the Clinical Picture of Pliothora
Vera. V. Georges Hayem. Index.

This book goes far back into the history of medical thought. Its
author has delved into antiquity to detect references to the blood
and has of course found them. The Old and the New Testaments
and the writings of the Hebrew, Arabic, Greek and Roman
philosophers and sages abound in mention of this topic but it is
not always quite clear to what they refer. It is a little better when
one comes down to the middle ages and later, for here the problem
of translation has become a little easier but 'blood' is mentioned
often and in many contexts. One could call this a history of haema-
tology but it could just as easily be a history of medicine in general.

Once Anton van Leeuwenhoek had described the red cells of
man in 1674 there could no longer be any doubt that haematology
had 'arrived'. From here on the path was clear and there were a
whole host of facts to be established and diseases to be described.
A great number of people contributed to the advancement of
knowledge in these fields. It is fascinating to read that in 1852
Vierordt concluded that there were between 4.60 and 5.35 red
cells per c.mm. To illustrate the development of thought, three
diseases have been selected for a brief description and one haema-
tologist is written up in some detail. One suspects that the fact
that the author received his training in Europe and that much of
this work was done in the same area had a lot to do with the
selection of this material.

It is a curious little book which will probably not command a
large reading public. Those who have an interest in medical
history may well find quite a few items of interest in it.

C.M.

THE SCIENTIFIC BASIS OF MEDICINE

Lectures on the Scientific Basis of Medicine Volume Five, 1955-56.
British Postgraduate Medical Federation, University of London.
Pp. xii + 473. Illustrations. 45s. net. London: The Athlone
Press. 1957.

Contents: I. Hypothesis and Speculation in Scientific Research. II. Experimental
Hypothermia in Animals. III. The Effects of Cold on Man. IV. Physiological
Effects of Anoxia in the Foetal and Newborn Lamb. V. The Oxygen Environ-

ment of the Human Foetus. VI. Isotopes in the Study of Problems of Pregnancy. VII. The Use of the Interference Microscope in Biological Research. VIII. The Steering of Metabolic Processes. IX. Vitamin A. X. Primary Protein Deficiencies with special reference to the specific Plasma Aprotinaemias. XI. Metabolism of Collagen. XII. Protein Ribbons and Sheets. XIII. Observations on the Structure of Connective Tissue Fibres. XIV. The Elucidation of Toxicity. XV. Industrial Toxicology. XVI. The Nutrition of Micro-Organisms. XVII. Living Muscle. XVIII. Proteins in Muscular Contraction. XIX. Observations on the Excitable Cortex in Man. XX. The Investigation of Gastric Digestive Function in Man. XXI. The Treatment of Hepatic Coma. XXII. The Physiology of the Lower Oesophagus and Cardia. XXIII. Renal Control of Acid-base Balance. XXIV. Some Anomalies in Endocrine Carcinogenesis. XXV. Recovery from the Lethal Effects of Radiation. XXVI. Physiology of Nasal Circulation.

The fifth series of lectures on the scientific basis of medicine published by the British Postgraduate Medical Federation maintains the high standard set by its predecessors. Once again each lecture is authoritative because given by a scientist actively engaged in research on the topic dealt with in the lecture. The distinguished contributors include O. G. Edholm on the effects of exposure to cold, J. F. Loutit on the effects of exposure to ionizing radiation,

N. H. Martin on hypoproteinaemia, and N. A. Krebs on the regulation of metabolism. The customary introductory lecture on the philosophy of medical science is by Sir Wilfrid le Gros Clark.

The series of lectures achieves its purpose of surveying growing points in medical science. The emphasis in this volume is on physiology and biochemistry. Much of the work depends on recent advances in histological technique, especially in interference microscopy and in electron microscopy. The lecture on living muscle demands some mathematical knowledge on the part of the reader.

Much of the information in this volume has no direct or immediate application to current medical practice but it is work such as this which will influence the medical practice of the future. Inevitably each reader will find more to interest him in some parts of the book than in others but there is something for everybody who is interested in the biological sciences on which medicine depends.

A.W.S.

CORRESPONDENCE : BRIEWERUBRIEK

PERSISTENT APNOEA ASSOCIATED WITH SCOLINE

To the Editor: I have read Dr. H. H. Samson with great interest on this subject in the *Journal* of 23 November.

I write as a scribe and not with authority, but his postulation seems to me to be a sound one.

As a general practitioner interested in anaesthesia and having given a fair number of anaesthetics of all kinds, I have, in a few of those cases, noticed the phenomenon described, but have been at a loss to explain it. Moreover, the dosage of Scoline given has erred on the conservative side. By a method—if one can call it such—of trial and error, I have found, without being aware of a reason for it, that the lower the pressure applied to the bag for lung inflation, the less the incidence of cases exhibiting undue apnoea. Now that Dr. Samson has so lucidly explained the mechanism of the apnoea, I can see the reason for it, and am most grateful for his article.

G. G. Airey

P.O. Box 127
Umtata, Transkei
9 December 1957

Samson, H. H. (1957): *S. Afr. Med. J.*, **31**, 1191.

HAEMOLYTIC STREPTOCOCCAL SORE THROAT AND SCARLET FEVER

To the Editor: I wish to draw your attention to the following problem:

There appears to be a minor epidemic of haemolytic streptococcal sore throats at this time of the year. It has been recognized for the last 30 years that the infection with haemolytic streptococci (Lancefield Group-A) is closely associated with scarlet fever, or that any infection caused by the above antigen and scarlet fever are identical conditions, as far as infectivity, complications and prognosis are concerned. The appearance of the rash only depends on the susceptibility of the patient to the haemolytic streptococcal exotoxin.

Possible complications following both conditions are only too well known. They include acute nephritis and acute rheumatic fever with polyarthritis, this being followed by endocarditis and myocarditis, with all their dire consequences. I have, therefore, considered it my duty to notify to the health authorities every case of proved haemolytic streptococcal infection of the Lancefield Group-A type, whether this was followed by a rash or not.

I am now informed that the Johannesburg City Health Department does not recognize haemolytic streptococcal infection of Lancefield Group-A type as scarlet fever and as a notifiable condition. All explanations were of no avail.

Surely it is time that notice was taken by the City health officials of the advances in bacteriology of the last 20-30 years. I found it futile to explain that the term scarlet fever or scarlatina has

become meaningless. It may, in my opinion, be retained to describe a syndrome or symptom, but certainly does not denote a condition in itself.

Peter Saling

40 1st Avenue West
Parktown North
Johannesburg
9 December 1957

TOBACCO ADDICTION

To the Editor: We have read with much interest and appreciation the editorial in your issue of 23 November 1957, on the subject of tobacco addiction, from which we quote the following affirmation in the concluding paragraph:

'Our patients are entitled to have presented to them the conclusions that are drawn from medical knowledge; it is not enough to put the facts before the public and to tell them to draw their own conclusions. By virtue of his scientific education and his training and experience, the doctor's conclusions are of more value than those of an ordinary layman. When that lay person's relative ignorance is combined with addiction, it is obvious that an unbiased conclusion will not easily be reached. While adults are free to do as they wish to please themselves to their heart's content within the limits of the law, adolescents are entitled to protection, and it is the duty of medical practitioners to give advice in accordance with their knowledge and convictions. To do otherwise indicates lack of a sense of responsibility.'

We are fully aware that the analogy between smoking and drinking is far from complete, but we would respectfully suggest that the principle involved in the above quotation merits application to the drink factor in respect of juveniles in general and to juvenile delinquency in particular.

I am directed by my Council to convey its appreciation of the editorial under notice, and to make a plea for consideration of the drink problem along similar lines, in which we are encouraged by our recollection of your editorial on 23 November 1946, wherein, commending Dr. Louis Bosman's article on 'Facts about Alcoholism', you state:

'It is no exaggeration to say that the lead of the medical profession in the study of this major national problem can contribute more towards its solution than any other single factor, for the doctor is not only concerned with curative medicine, but even more so with preventive medicine.'

H. R. Cocking
Hon. Secretary

South African Temperance Alliance
P.O. Box 1443
Cape Town
13 December 1957

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The Dermatologist and Radiotherapy
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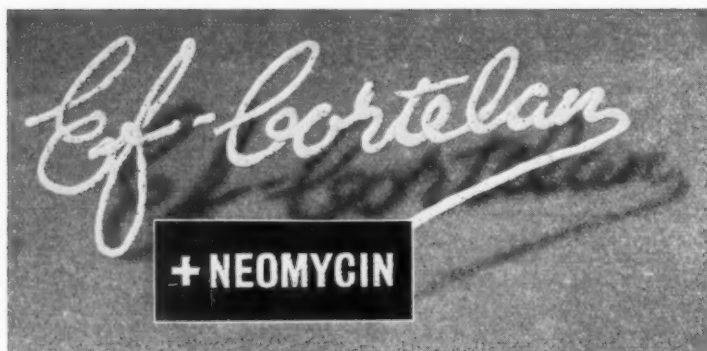
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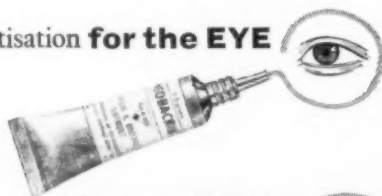


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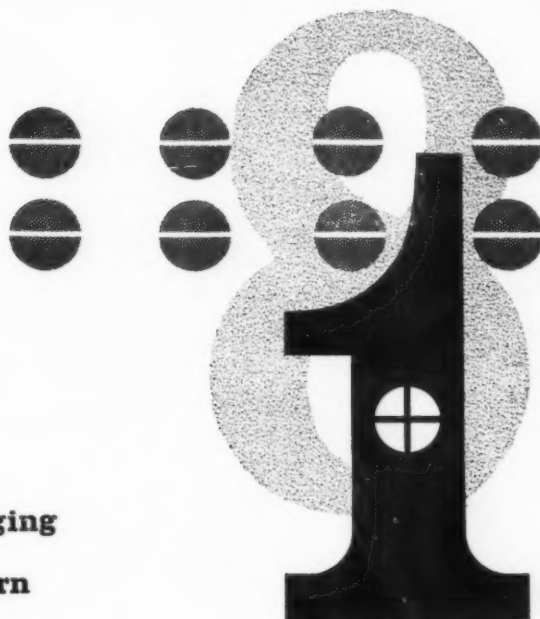
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(Pr-S397) NORTHERN RHODESIA—LARGE HOSPITAL TOWN. HALF SHARE IS FOR SALE IN PARTNERSHIP PRACTICE AND SELLER WISHES TO LEAVE EARLY IN THE NEW YEAR. ENTIRELY EUROPEAN PRACTICE WITH ONLY MINOR SURGERY DONE. MIDWIFERY PLAYS AN IMPORTANT PART AND AS THE POPULATION IS A YOUNG ONE, PEDIATRICS PREDOMINATES. THIS SHARE IS WORTH £4,800 NET PER ANNUM AND THE PREMIUM IS ONLY £1,500, PLUS £250 FOR HALF SHARE IN SURGERY EQUIPMENT. TERMS AVAILABLE.

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(Pr-S401) REEF HOSPITAL TOWN. Owing to illness the owner of an established practice, is compelled to undergo prolonged treatment and is forced to sell immediately. Average annual NET income of £2,500 and practice is easy to run. Both European and Native work. Two separate consulting rooms fully equipped and one with X-ray and darkroom equipment. NO REASONABLE OFFER REFUSED.

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(Pr-S394) RHODESIA—LARGE CENTRE. Hospital facilities. Owner of a large mixed, general practice, requires TWO PARTNERS. TREMENDOUS EXPANSION POSSIBLE IN AFRICAN PRACTICE. Proposition will actually suit someone with both Medical and Dental degrees. Also scope for young woman doctor. Full details on request.

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(Pr-S392) JOHANNESBURG. OWNER OF MOST SELECT PRACTICE, REQUIRES A PARTNER AND PREFERS SOMEONE WITH PREVIOUS EXPERIENCE AND/OR A HIGHER DEGREE. THIS LUCRATIVE PRACTICE HAS AN ANNUAL TURNOVER OF £12,000 AND OFFERS WONDERFUL OPPORTUNITY FOR A YOUNG MAN WITH STRONG PERSONALITY AND DRIVE.

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Provinsiale Administrasie van die Kaap die Goeie Hoop

HOSPITAALDIENS : LIVINGSTONE-HOSPITAAL, PORT ELIZABETH : VAKATURES VIR MEDIESE BEAMPTES

Aansoeke word ingewag van behoorlik gekwalifiseerde kandidate met toepaslike uitgebreide vorige ondervinding vir aanstelling in poste van Mediese Beampte, Graad I, by die Livingstone-hospitaal, Port Elizabeth, in die volgende departemente:

Departement	Aantal Poste
Chirurgie	3 poste.
Ginekologie en Verloskunde	1 pos.
Interne Geneeskunde	1 pos.
Kindersiektes	1 pos.

Van die bekleërs sal verwag word om as hoofde van die onderskeie departemente op te tree en regstreeks leiding aan die junior mediese beamptes in hulle departemente te gee. (Die salaris betaalbaar sal £1,500 per jaar (vasgestel) wees.

Benewens die basiese salaris is 'n nie-pensioendraende lewenskostetoelae, wat tans £234 per jaar bedra, betaalbaar aan getroude manlike beamptes.

Die diensvoorwaardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraadsdiens nr. 19 van 1941, soos gewysig, en die regulasies wat daarkragens opgestel is.

Die Livingstone-hospitaal is deur die Suid-Afrikaanse Mediese en Tandheelkundige Raad erken vir die doel van die reëls vir die registrasie van spesialiste in die verskeie departemente.

Die suksesvolle aansoekers vir permanente aanstelling, indien nie reeds in die Hospitaaldiens nie, moet bevredigende geboorte- en gesondheidsertifikate indien.

Kandidate word versoek om besonderhede aangaande die volgende te verstrek:

- Akademie kwalifikasies (grade en diplomas verkry en die standaard behaal in professionele eksamens; studiebeurse en spesiale toekennings.
- Professionele ondervinding (indien by 'n inrigting, naam van die inrigting waar die kandidaat gewerk het, en die tipe werk wat hy uitgevoer het).
- Name van drie persone na wie verwys kan word (van wie een verkieslik iemand moet wees wat werksaam is in dieselfde afdeling van geneeskunde as die kandidaat).

Aansoeke moet in duplo gedoen word op die voorgeskrewe vorm, Staf 23, wat verkrygbaar is by die Direkteur van Hospitaaldiens, Posbus 2060, Kaapstad, of by die Mediese Superintendant van enige provinsiale hospitaal in die Kaapprovinsie.

Kandidate moet die vroegste datum meld waarop hulle diens kan aanvaar.

Die ingevulde aansoekvorms moet aan die Direkteur van Hospitaaldiens, Posbus 2060, Kaapstad, gerig word, en moet hom uiterlik op 18 Januarie 1958 bereik.

M 371951

ASSISTANT REQUIRED

Assistant required with definite view to partnership if suitable in established practice South Coastal Hospital Town. Must have own car. Bilingual, married Gentile preferred. Salary £120 per month (depending on experience), plus travelling expenses. Write A.J.B., P.O. Box 643, Cape Town.

Provinsiale Administrasie van die Kaap die Goeie Hoop

UNIVERSITEIT VAN STELLENBOSCH : GESAMENTLIKE
MEDIESE PERSONEEL VIR KARL BREMER-HOSPITAAL,
BELLVILLE : VAKATURE

Aansoeke word ingewag van behoorlik gekwalifiseerde Genees-
here vir aanstelling in die volgende pos:

Departement van Chirurgie

Geneesheer, Graad A, met salaris op die skaal £684, 780, 876
per jaar.

Aanstelling sal geskied op 'n kontraktuele basis vir die tydperk
eindigende 30 Junie 1958, by verstryking waarvan die bekleër
aansoek mag doen om her-aanstelling.

Bewens die basiese salaris is 'n nie-pensioendraende lewens-
kostetoelae van £234 per jaar betaalbaar aan getroude manlike
volydse beamptes en werknemers.

Die diensvoorwaardes word voorgeskryf ingevolge die Ordon-
nansie op Hospitaalraadsdiens nr. 19 van 1941, soos gewysig
en die regulasies daarkragtens opgestel, asook die ooreenkoms
aangegaan tussen die Provinsiale Administrasie en die Universiteit
van Stellenbosch.

Van die Gesamentlike Mediese Personeel word vereis om die
Provinsiale Administrasie en die Universiteit van Stellenbosch
gesamentlik te dien.

Kandidate moet tot en insluitende drie jaar ondervinding hê
na graad behaal is of twee jaar ondervinding na registrasie, en
word versoek om besonderhede aangaande die volgende te ver-
strek:

- Akademie kwalifikasies (grade en diplomas verwerf
en die standaard behaal in professionele eksamens;
studiebeurse en spesiale toekennings).
- Professionele ondervinding (nie alleen die naam van die
werkgewer nie maar ook dié van die inrigting waar
die aansoeker gewerk het, en die tipe werk wat hy
uitgevoer het).
- Name van drie persone na wie verwys kan word (van
wie een verkieslik iemand moet wees wat werksaam is
in dieselfde afdeling van geneeskunde as die aansoeker),
en wie deur die aansoeker versoek moet word om ver-
troulike verslae voor die sluitingsdatum vir die ontvangs
van aansoeke by die Mediese Superintendent in te dien.

Aansoeke moet in duplo gedoen word op die voorgeskrewe
vorm, Staf 23, wat verkrygbaar is by die Direkteur van Hospitaal-
dienste, Posbus 2060, Kaapstad, of by die Mediese Superin-
tendent van enige provinsiale hospitaal in die Kaapprovinsie.

Die ingevulde aansoekvorms moet aan die Mediese Superin-
tendent gerig word, en moet hom uiterlik op 18 Januarie 1958,
bereik.

M 371953

Provinsiale Administrasie van die Kaap die Goeie Hoop

GREY-HOSPITAAL, KING WILLIAM'S TOWN
VAKATURE VIR ERE-MEDIESE BEAMPT

Aansoeke word ingewag van geregistreerde Geneeshere vir aan-
stelling in die volgende pos by die Grey-hospitaal, Kingwilliams-
town, met ingang vanaf 1.1.58.

Benaming

Getal poste

Ere-geneesheer

1

Die aanstelling, diens, voorwaardes en besoldiging aan boge-
noemde pos verbonde, is onderworpe aan die regulasies afge-
kondig by Provinsiale Kennisgewing No. 553 van 1953.

Aansoeke moet gedoen word op die voorgeskrewe vorm, wat
verkrygbaar is by die Mediese Superintendent, Grey-hospitaal,
King William's Town, aan wie alle voltooid vorms gerig moet
word.

Die sluitingsdatum vir die ontvangs van aansoeke is 28 Desem-
ber 1957.

A 186427

Provinsiale Administrasie van die Kaap die Goeie Hoop

UNIVERSITEIT VAN KAAPSTAD : GESAMENTLIKE
MEDIESE PERSONEEL VIR GROOTE SCHUUR- EN
ANDER OPLEIDINGSHOSPITALE : VAKATURE

Aansoeke word ingewag van behoorlik gekwalifiseerde Geneeshere
vir aanstelling in 4 sessies van 'n pos van:

Geneesheer, Graad G, in die Departement van Borskas-Chirurgie
met salaris teen die Graad E-skaal d.i. £169 per sessie per jaar
(vasgestel).

'n Sessie is vier uur per week in verband met kliniese en/of
opleidingswerk, maar is nie noodwendig onafgebroke nie.

Kandidate moet die aantal sessies meld wat hulle bereid is om
by aanstelling te aanvaar.

Aansoekers moet of geregistreer wees as spesialiste of moet
in besit wees van toepaslike nagraadse diplomas of grade in
Borskas-Chirurgie, en word versoek om besonderhede aangaande
die volgende te verstrek:

- Akademie kwalifikasies (grade en diplomas verwerf
en die standaard behaal in professionele eksamens;
studiebeurse en spesiale toekennings).
- Professionele ondervinding (nie alleen die naam van
die werkgewer nie maar ook dié van die inrigting waar
die aansoeker gewerk het, en die tipe werk wat hy uit-
gevoer het).
- Name van drie persone na wie verwys kan word (van
wie een verkieslik iemand moet wees wat werksaam is
in dieselfde afdeling van geneeskunde as die aansoeker),
en wie deur die aansoeker versoek moet word om ver-
troulike verslae by die Direkteur van Hospitaaldienste,
in te dien, voor die sluitingsdatum vir die ontvangs van
aansoeke.

Die diensvoorwaardes word voorgeskryf ingevolge die Ordon-
nansie op Hospitaalraadsdiens, nr. 19 van 1941, soos gewysig
en die regulasies daarkragtens opgestel, asook die ooreenkoms
aangegaan tussen die Provinsiale Administrasie en die Universiteit
van Kaapstad.

Van die Gesamentlike Mediese Personeel word vereis om
gesamentlik die Provinsiale Administrasie en die Universiteit van
Kaapstad te dien.

Aansoek moet in duplo gedoen word op die voorgeskrewe
vorm, Staf 23, wat verkrygbaar is by die Direkteur van Hospitaal-
dienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent
van enige provinsiale hospitaal in die Kaapprovinsie.

Die voltooid aansoekvorms moet aan die Direkteur van
Hospitaaldienste gerig word en moet hom uiterlik op 18 Januarie
1958, bereik.

M 371952

Departement van Verdediging

VAKATURE VIR DEELTYDSE ALGEMENE MEDIESE
PRAKTIJSYN

'n Vakature vir ondergemelde pos bestaan in die SA Genees-
kundige Diens, Departement van Verdediging.

Applikante moet tweetalige Burgers van die Unie van Suid-
Afrika wees, nie ouer as 60 jaar nie, in besit van 'n erkende mediese
graad en moet by die Suid-Afrikaanse Geneeskundige en Tand-
heelkundige Raad geregistreer wees as 'n Mediese Praktisyn.

Applikante moet in die Potchefstroomgebied woonagtig wees.

POTCHEFSTROOM

<i>Getal Poste</i>	<i>Deeltydse pos van</i>	<i>Weeklikse diensure nie meer as</i>	<i>Jaarlikse Besoldiging nie hoër as</i>
1	Algemene Dienste	18	£723

Aansoeke om aanstelling moet die kantoor van die Genees-
heergeneraal, Verdedigingshoofkwartier, Potgieterstraat, Pretoria,
nie later dan 15 Januarie 1958, bereik nie.

12227

Vakante Deeltydse Distriktgeneesheerskappe

Aansoeke om ondergenoemde poste van distriktgeneesheerskappe met vermelding van land van geboorte, kwalifikasies, ondervinding, vorige en teenswaardige betrekkinge en die vroegste datum waarop diens aanvaar kan word, indien aangestel, word deur die Sekretaris van Gesondheid, Posbus 386, Pretoria, ingewag en moet hom voor of op 15 Januarie 1958, bereik. Afskrifte van getuigskrifte mag gestuur word.

Invloedwerwing deur of ten behoeve van 'n applikant stel hom bloot aan diskwalifikasie.

Die aanstelling is deeltydse en privaattpraktijk word toegelaat. Applikante moet ook vermeld of hulle albei amptelike tale kan praat, lees en skryf, asook of hulle melaatsheid en veneriese siekte kan diagnoseer.

Applikante moet verder vermeld of hulle ondervinding as 'n geneeskundige gesondheidsbeampte of in 'n soortgelyke hoedanigheid het. Indien om meer as een pos aansoek gedoen word, moet 'n afsonderlike aansoek ten opsigte van elke ingedien word.

Plek	Salaris per jaar £	Toelae vir medisyne per jaar £
Transvaal		
Alldays	435	25
Laersdrif	600	150
Vanderbijlpark	500	Kontrak
Vaalwater	560	70
Devon	200	30
Kaapprovinsie		
Pearston	400	40
Port Nolloth	750	60
Montagu	300	40
Piet Plessis	250	25
Oranje-Vrystaat		
Thaba 'Nchu	500	70
Natal		
Pinetown	350	20
Eshowe	685	70

Die salaris dek alle gewone en roetine dienste, dog reistoelae teen 1s. per myl vir alle afstande wat buite 'n omtrek van drie myl vanaf die hoofstandplaas afgele word, nagverblyf teen £1 0s. 0d. en bykomende vergoeding vir sekere dienste word betaal, asook gelde vir bywoning van hofsittings en geregtelike lykskouings ooreenkomstig die skaal van die Departement van Justisie.

Aansoekvorms en kopieë van kontrakvorms word op aansoek verskaf. 12344

Provinsiale Administrasie van die Kaap die Goeie Hoop

HOSPITAALDEPARTEMENT HOSPITAALDIENS : VAKATURE

1. Aansoeke word ingewag om die volgende vakante pos:

Pos	Hospitaal	Emolumente	Sluitings- datum
Junior Inwonende Mediese Beampte (Intern)	Provinsiale Hospitaal, Fort Beaufort	£510 p.j., min kos en inwoning teen die tarief van £148 per jaar.	18.1.58

Aansoek moet aan die Mediese Superintendent gerig word.

2. Die diensvoorwaardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraadsdiens nr. 19 van 1941, soos gewysig, en die regulasies wat daarkragtens opgestel is.

3. Benewens die salaris soos aangedui is 'n nie-pensioen-draende lewenskostetoelae van £234 per jaar betaalbaar aan 'n voltydse getroude manlike beampte of werknemer.

4. Aansoek moet gedoen word op die voorgeskrewe vorm (Staf 23) wat verkrygbaar is by die Direkteur van Hospitaal-dienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent van enige provinsiale hospitaal in die Kaapprovinsie.

5. Kandidate moet die vroegste datum waarop hulle diens kan aanvaar meld. M371900

Vacant Part-Time District Surgeoncies

Applications for the undermentioned district surgeoncies accompanied by full particulars as to date and country of birth, qualifications, experience, previous and present appointments of the applicants and the earliest date on which they can assume duty if appointed, should reach the Secretary for Health, P.O. Box 386, Pretoria, not later than 15 January 1958. Copies of testimonials may be submitted.

Canvassing by or on behalf of any applicant is liable to disqualify him.

The appointments are on a part-time basis and private practice is not precluded.

Applicants should state whether they can speak, read and write both official languages, also whether they are competent to diagnose leprosy and venereal diseases.

Applicants should also state whether they have any experience as a Medical Officer of Health or in any similar capacity. If more than one post is applied for, a separate application should be submitted in respect of each.

Place	Salary per annum £	Drug allowance per annum £
Transvaal		
Alldays	435	25
Laersdrif	600	150
Vanderbijlpark	500	Contract
Vaalwater	560	70
Devon	200	30
Cape Province		
Pearston	400	40
Port Nolloth	750	60
Montagu	300	40
Piet Plessis	250	25
Orange Free State		
Thaba 'Nchu	500	70
Natal		
Pinetown	350	20
Eshowe	685	70

The salaries cover all ordinary and routine services, but travelling allowances of 1s. per mile for all mileage travelled outside a radius of three miles from headquarters, night detention of £1 0s. 0d. and supplementary fees for certain other services will be payable, also fees for attendance at courts and inquests in accordance with the tariff of the Department of Justice.

Forms of application and copies of draft agreement will be furnished on application. 12344

Vacant District Surgeoncies

Applications for the undermentioned District Surgeoncies, accompanied by particulars as to date and country of birth, qualifications, experience and previous and present appointments of applicants, should reach the Secretary for South West Africa, Windhoek, not later than 15 January 1958.

Testimonials (copies) may be submitted, but canvassing by petition or otherwise should not be resorted to. The appointment is on a part-time basis and private practice is not precluded. Applicants should state whether they have a knowledge of both official languages. Surgical experience will be a recommendation. Applicants must state the earliest date on which they can assume duty.

District	Headquarters	Salary
(1) Otavi Police district.	Otavi.	£360 per annum.
(2) Aranos-Gochas.	Aranos.	£360 per annum.
(3) Walvis Bay.	Walvis Bay.	£500 per annum.

The salary mentioned covers all ordinary and routine services, but travelling allowance at 1s. 6d. per mile for all mileage travelled beyond a radius of three miles from headquarters, night detention at 22s. 6d. and supplementary fees for certain other services will be payable; also fees for attendance at courts and inquests in accordance with the tariff of the Administration's Justice Branch.

The appointment at Walvis Bay includes the duties of Port Health Officer.

Applications should be submitted on form Z. 83 obtainable from any Magistrate's office. 12280

Provincial Administration of the Cape of Good Hope

GREY HOSPITAL, KING WILLIAM'S TOWN VACANCY FOR HONORARY MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for appointment to the undermentioned post at Grey Hospital, King William's Town, w.e.f. 1.1.58.

Designation	No. of Posts
Honorary Medical Practitioner	1
The appointment, conditions of service and remuneration attached to the post shall be subject to the provisions of the regulations promulgated under Provincial Notice No. 553 of 1953. Applications must be made on the prescribed form, which is obtainable from the Medical Superintendent, Grey Hospital, King William's Town, to whom all completed forms must be addressed.	
The closing date for receipt of applications will be 28 December 1957.	

A 186427

Vakante Poste in die Staatsdiens

1. Mediese Inspekteur van Skole (£1,080 × 60—1,620)

Verleste: Registrasie as mediese praktisyn by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad.

Aansoeke aan die Provinsiale Sekretaris, Pietermaritzburg.

2. Tandarts (£1,080 × 60—1,260)

Verleste: Registrasie as tandarts by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad.

Aansoeke aan die Sekretaris van Gesondheid, Pretoria.

Aansoek moet gedoen word op vorms Z. 83 en Sdk. 8 (a) wat van die naaste magistraatskantoor of van die aangewese adresse verkrygbaar is. Die voltooië aansoek asook navrae moet gerig word aan die adresse hierbo aangedui. Oorspronklike getuigskrifte en sertifikate moet nie ingedien word nie.

Die sluitingsdatum vir die ontvangs van aansoeke is 31 Januarie 1958.

12258

Vakante Betrekkings van Distriktgeneesheer

Aansoeke om die ondergenoemde poste van Distriktgeneesheer met vermelding van datum- en land van geboorte, kwalifikasies, ondervinding, vorige en teenswoordige betrekkings, word deur die Sekretaris van Suidwes-Afrika, Windhoek, ingewag en moet hom nie later as 15 Januarie 1958 bereik nie.

Getuigskrifte (afskrifte) kan ingestuur word, maar geen versoekskrifte ter ondersteuning van aansoeke word toegelaat nie. Applikante moet vermeld of hulle 'n kennis van albei amptelike tale besit. Die aanstelling is van 'n deeltydse aard en privaat-praktik word toegelaat.

Chirurgiese ervaring sal 'n aanbeveling wees. Applikante moet die vroegste datum waarop hulle diens kan aanvaar, meld.

Distrik	Hoofkwartier	Salaris
(1) Otavi-Polisiedistrik.	Otavi.	£360 per jaar.
(2) Aranos-Gochas.	Aranos.	£360 per jaar.
(3) Walvisbaai	Walvisbaai.	£500 per jaar.

Die genoemde salaris dek alle gewone en roetine dienste, maar reistoelae teen 1s. 6d. per myl vir alle afstande afgelê buite drie myl van die hoofkwartier, nagverblyf teen 22s. 6d. en bykomende vergoeding vir sekere dienste word betaal, asook vergoeding vir bywoning van hofsittings en ondersoeke, ooreenkomstig die tarief van die Afdeling Justisie van die Administrasie.

Die pos te Walvisbaai sluit ook die dienste van hawegesondheidsbeampte in.

Aansoeke moet ingedien word op vorm Z. 83, wat van enige Magistraatskantoor verkrygbaar is.

12280

BELANGRIKE KENNISGEWING

Die Federale Raad verlang dat alle geneeshere, wat aansoek wil doen om kontrakpraktijk-aanstelling wat in hierdie kolomme geadverteer word, eers die Eresekretaris van die Tak van die Mediese Vereniging van Suid-Afrika, binne wie se gebied die aanstelling val, moet raadpleeg sodat hulle kan weet of die voorwaardes van die aanstelling bevredigend is of nie. Kontrakpraktijk-aanstellings sluit in alle aanstellings deur Mediese Bystandsverenigings, Siekefondse en Fabriekke. Die adresse van die Eresekretaris van Takke is soos volg:

Grens: Dr. J. K. McCabe, Posbus 405, Oos-Londen.
Oos-Kaapland: Dr. Ella Britten, Hoogstraat 133, Grahamstad.

Midde-Kaapland: Dr. P. Jabkowitz, Glenairlie 1, Kaapweg 69, Port Elizabeth.

Wes-Kaapland: Dr. M. J. Bailey, Posbus 643, Kaapstad.
Oos-Rand: Dr. W. M. Bezuidenhout, Posbus 536, Benoni.
Griekwaland-Wes: Mnr. A. B. de Villiers Minnaar, Dutoitspanweg, Kimberley.

Natalse Kus: Dr. K. W. Dyer, Mediese Sentrum 53, Fieldstraat, Durban.

Natalse Binneland: Dr. H. A. Kalley, Posbus 285, Pietermaritzburg.

Noord-Transvaal: Dr. E. Fasser, Administrasie-Gebou 28, Algemene Hospitaal, Pretoria.

Oranje-Vrystaat en Basoetoland: Dr. C. V. van der Merwe, Posbus 834, Bloemfontein.

Suid-Transvaal: Dr. J. Gluckman, Posbus 10102, Johannesburg.

Suidwes-Afrika: Dr. H. C. Paradisgarden, Posbus 1667, Windhoek.

Transkei: Dr. J. H. Hofmeyr, Posbus 318, Umtata.

Vaalrivier: Dr. A. D. Smit, Posbus 742, Vereeniging.

Vacant Posts in the Public Service

1. Medical Inspector of Schools (£1,080 × 60—1,620)

Requirements: Registration as a medical practitioner with the South African Medical and Dental Council.

Applications to the Provincial Secretary, Pietermaritzburg.

2. Dentist (£1,080 × 60—1,260)

Requirements: Registration as dentist with the South African Medical and Dental Council.

Applications to the Secretary for Health, Pretoria.

Application must be made on forms Z. 83 and P.S.C. 8 (a) which are obtainable from the nearest Magistrate's Office or from the addresses indicated. The completed application, as well as enquiries, must be directed to the addresses indicated above. Original testimonials and certificates must not be submitted.

The closing date for the receipt of applications is 31 January 1958.

12258

ASSISTANT PATHOLOGIST PERTH, WESTERN AUSTRALIA

Medical Graduate of 4 or 5 years standing for busy private clinical pathology practice.

Applicant must be experienced in routine laboratory procedures.

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VACANCY FOR JUNIOR MEDICAL OFFICER AT THE DR. A. J. STALS MEMORIAL SANATORIUM

Applications are invited from registered Medical Practitioners (European male or female), for the position of Junior Medical Officer at the Dr. A. J. Stals Memorial Sanatorium, Westlake, Retreat, which is a 500-bedded Sanatorium for the treatment of Non-European female and child Tuberculosis patients.

The commencing salary attaching to this post will be at the rate of £1,018 per annum on the salary scale £1,018 × 50—£1,268 per annum, plus temporary cost of living allowance, which at present is at the rate of £234 per annum on the married basis and £58 16s. per annum on the single basis.

The foregoing appointment will be subject to the provisions of the Union Health Department's Circular No. 10 of 1954, as amended, including those regarding deductions for quarters, etc., if such are provided.

Applications must contain full details of qualifications, previous experience, age, sex and marital state and whether bilingual, and the earliest date on which duty could be commenced, if appointed. Copies of recent testimonials covering professional experience should be furnished.

The successful applicant will be required to serve a probationary period of six months and, on confirmation of appointment, to become a member of the Council's Pension Scheme and of the S.A. Association of Municipal Employees. Medical fitness is therefore a condition of appointment.

Any further information required may be obtained upon enquiry direct to the Medical Officer of Health of this Council.

Applications must be addressed in writing to the undersigned to reach the Council's offices not later than noon on Monday, 13th January, 1958.

Canvassing of Councillors or officials will prove a disqualification.

6 Dorp Street
Cape Town
28 December 1957

C. V. Emms
Secretary
8405

THE RAND MUTUAL ASSURANCE COMPANY, LIMITED APPOINTMENT OF PART-TIME OPHTHALMOLOGIST WELKOM, ODENDAALSRSUS AND VIRGINIA

Applications for the above post are invited from registered Practitioners. Details of the conditions and emoluments pertaining to the appointment are obtainable on application by bona fide applicants.

The successful applicant must be resident in the Welkom area and must be prepared to assume duties on 1st February, 1958.

Applications addressed to the Manager, The Rand Mutual Assurance Company, Limited, P.O. Box 413, Johannesburg, should be submitted as soon as possible.

BOART & HARD METAL PRODUCTS S.A. LTD. PART-TIME MEDICAL OFFICER

Applications are invited from fully qualified registered Medical Practitioners in respect of the above appointment. Remuneration on sessional basis plus travelling fees. Applications must reach the Secretary—P.O. Box 9325, Johannesburg, not later than 11th January, 1958.

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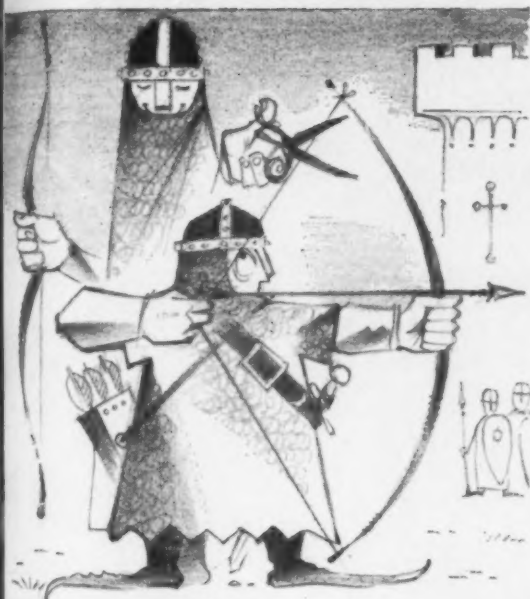
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